BERRYESSA PLAZA
AIR QUALITY & GREENHOUSE GAS EMISSIONS ASSESSMENT

San José, California

January 27, 2021

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Introduction

The purpose of this report is to address air quality and greenhouse gas (GHG) emissions impacts associated with the proposed commercial development on a currently vacant parcel northeast of the intersection of Berryessa Road and N. Jackson Avenue in San Jose, California. The air quality impacts and GHG emissions associated with the project would be from site preparation and grading, construction of infrastructure, and construction and operation of 47,000 square feet (sf) of commercial, retail, and/or office space. Air pollutant and GHG emissions associated with the construction and operation of the project were predicted using appropriate computer models. In addition, the potential construction community risk impact to nearby sensitive receptors from toxic air contaminant (TAC) sources (i.e., construction and local roadways) affecting was evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The project proposes to construct two new commercial buildings totaling 47,000 sf and 200 parking spaces on a currently vacant 2.76-acre lot. The project site is located at the eastern quadrant of the intersection of Berryessa Road with N. Jackson Avenue and Flickinger Avenue in San Jose, California.

Setting

The project is 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 except for 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, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{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.

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

Toxic Air Contaminants

TACs 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 complicated scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015.[2] See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the site are children that may be living in the multi-family housing developments adjacent to the north and south east of project site. Brownell Care Home, an assisted living facility, is located approximately 1,000 south and east of the site in a residential neighborhood and Vinci Park Elementary School is located approximately 1,636 feet west of the site.

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

Regulatory Agencies

CARB has adopted and implemented several 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.[3] 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 this assessment to evaluate air quality impacts of projects.[4] The detailed community risk modeling methodology used in this assessment is contained in *Attachment 1*.

City 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.

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

[3] Available online: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed: November 21, 2014.
[4] Bay Area Air Quality Management District. 2017. *BAAQMD CEQA Air Quality Guidelines*. May.

Applicable Goals – Toxic Air Contaminants

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

Applicable Policies – Toxic Air Contaminants

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

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

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

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

Actions – Toxic Air Contaminants

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

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

Applicable Goals – Construction Air Emissions

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

Applicable Policies – Construction Air Emissions

MS-13.1 Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

Applicable Actions – Construction Air Emissions

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

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. Air Quality Significance Thresholds

Criteria Air Pollutant	**Construction Thresholds**	**Operational Thresholds**	
	Average Daily Emissions (lbs./day)	**Average Daily Emissions (lbs./day)**	**Annual Average Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour 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 1000-foot zone of influence)**	
Excess Cancer Risk	>10 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3	>0.8 µg/m^3	
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 *(660 metric tons annually or 2.8 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.			

IMPACTS AND MITIGATION MEASURES

Impact: Conflict with or obstruct implementation of the applicable air quality plan?

BAAQMD is the regional agency responsible for overseeing compliance with State and Federal laws, regulations, and programs within the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD, with assistance from the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), has prepared and implements specific plans to meet the applicable laws, regulations, and programs. The most recent and comprehensive of which is the *Bay Area 2017 Clean Air Plan*.[5] The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate. The BAAQMD has also developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality impacts. In formulating compliance strategies, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel, which in turn affects region-wide emissions of air pollutants and GHGs.

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

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

The Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the 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 O_3, $PM_{2.5}$ and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O_3 precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size were input to CalEEMod to generate a default construction schedule. The CARB EMission FACtors 2017 (EMFAC2017) model was used to predict

[5] Bay Area Air Quality Management District (BAAQMD), 2017. *Final 2017 Clean Air Plan.*

emissions from construction traffic, which includes worker travel, vendor trucks and haul trucks.[6] The model output from CalEEMod along with construction inputs are included as *Attachment 2* and EMFAC2017 vehicle emissions modeling outputs are included in *Attachment 3*.

Land Use Inputs

The proposed project land uses were input into CalEEMod as follows:

- 47,000 sf entered as "Retail – Strip Mall" on 2.76-acres, and
- A 200-space, 73,226 sf asphalt parking lot entered as "Parking – Parking Lot."

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment list and schedule, were based on CalEEMod defaults for a project of this type and size that was modified and approved by the applicant.

CalEEMod defaults were used for construction equipment, equipment quantities, average hours of equipment use per day, and work schedule for each phase with an assumed construction start date of January 2021. The default construction schedule produced was approximately 13 months, or 269 construction workdays. Construction was estimated to be complete by January 2022, with the first year of operation assumed to be 2022.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were estimated for soil material imported and/or exported to the site and cement and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. The number of concrete and asphalt total round haul trips were estimated using the project plans provided by the applicant to estimate material volumes and an assumed 10 cubic yards (CY) per material delivery for the project. Concrete/asphalt deliveries were converted to total one-way trips by assuming two trips per delivery. Excavation on the site was assumed to be balanced, therefor, no soil import/export trips were included.

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC2014 motor vehicle emission factor model. This model has been superseded by the EMFAC2017 model. However, CalEEMod has not been updated to include EMFAC2017. Therefore, construction traffic information was combined with EMFAC2017 motor vehicle emissions factors to estimate construction site trip emissions. EMFAC2017 provides aggregate emission rates in grams per mile for each vehicle type. The construction traffic vehicle mix for this study was based on CalEEMod default assumptions, where worker trips are assumed to be

[6] See CARB's EMFAC2017 Web Database at https://www.arb.ca.gov/emfac/2017/

comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trips, including cement trucks, are comprised of large trucks (EMFAC category HHDT). Travel distances are based on CalEEMod default lengths, which are 10.8 miles for worker travel, 7.3 miles for vendor trips and 20 miles for hauling. Since CalEEMod does not address cement or asphalt haul trips, these were treated as vendor travel distances. Each trip was assumed to include an idle time of 5 minutes and emissions associated with vehicle starts were also included. EMFAC2017 emission rates from calendar year 2021 for Santa Clara County were used. Table 2 provides the traffic inputs that were combined with the EMFAC2017 emission factors to compute vehicle emissions.

Table 2. Construction Traffic Data Used for EMFAC2017 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Total Worker[1]	Total Vendor[1]	Total Haul[2]	
Vehicle mix[1]	71.5% LDA 6.4% LDT1 22.1% LDT2	38.1% MHDT 61.9% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	7.3 (Cement/Asphalt)	5 Minute Truck Idle Time
Demolition	260	-	-	
Site Preparation	24	-	-	
Grading	48	-	-	0 cy Soil Import/Export
Trenching	30	-	-	
Building Construction	10,120	4,400	394	197 Cement Truck Deliveries
Architectural Coating	90	-	-	
Paving	150	-	181	904 cy Asphalt

Notes:
[1] Based on 2021 EMFAC2017 vehicle fleet mix for Santa Clara County.
[2] Hauling trips estimated based on plans provided by the applicant.

Summary of Computed Construction Period Emissions

Annual emissions were predicted using CalEEMod and EMFAC2017. Average daily emissions were computed by dividing the total construction emissions by the number of construction days (269 construction workdays). Table 3 shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust estimated during construction of the project. As indicated in Table 3, predicted construction period emissions would not exceed the BAAQMD significance thresholds.

Table 3. Construction Period Emissions - Unmitigated

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Total construction emissions (tons)	0.8 tons	2.3 tons	0.12 tons	0.11 tons
Average daily emissions (pounds)[1]	5.8 lbs./day	17.1 lbs./day	0.9 lbs./day	0.8 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 269 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: Implement BAAQMD-Recommended Measures to Control Particulate Matter Emissions during Construction.

Measures to reduce pollutant emissions from construction are recommended to reduce fugitive dust emissions and ensure that short-term health impacts to nearby sensitive receptors are minimized. During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. The contractor shall implement the following best management practices:

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

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

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

4. All vehicle speeds on unpaved roads shall be limited to 15 mph.

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

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 2 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. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

8. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph and visible dust extends beyond site boundaries.

9. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction adjacent to sensitive receptors. Wind breaks should have at maximum 50 percent air porosity.

10. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

11. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

12. Avoid tracking of visible soil material on to public roadways by employing the following measures if necessary: (1) Site accesses to a distance of 100 feet from public paved roads shall be treated with a 6 to 12-inch compacted layer of wood chips, mulch, or gravel and (2) washing truck tires and construction equipment of prior to leaving the site.

13. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

Effectiveness of Mitigation Measure AQ-1

Mitigation Measure AQ-1 represents enhanced mitigation measures that would achieve greater than an 80 percent reduction in on-site fugitive PM_{10} and $PM_{2.5}$ emissions. These measures are consistent with recommendations in the BAAMQD CEQA Guidance for providing "best management practices" to control construction emissions.

Additional Mitigation Measures

Mitigation measures in addition to *AQ-1* are required as a result of the health risk impacts assessment described in the following section(s). In order to meet BAAQMD single source and/or cumulative source health risk thresholds for DPM, $PM_{2.5}$ of non-cancer health impacts (HI), the following additional mitigation measure are required:

Mitigation Measure AQ-2: **Selection of equipment during construction to minimize emissions.**

The project shall develop a plan demonstrating that the off-road equipment used onsite to construct the project would achieve a fleet-wide average 88-percent reduction in DPM exhaust emissions or greater. One feasible plan to achieve this reduction would include the following:

- All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet U.S. EPA particulate matter emissions standards for Tier 4 Final engines. Where Tier 4 equipment is not available, exceptions could be made for equipment that includes CARB-certified Level 3 Diesel Particulate Filters or equivalent. Equipment that is electrically powered or uses non-diesel fuels would also meet this requirement.

- Provide line power to the site during the early phases of construction to minimize the use of diesel-powered stationary equipment, such as generators.

- Cranes shall be powered by electricity or alternative fuel.

Effectiveness of Mitigation Measure AQ-2

CalEEMod was used to compute emissions associated with this mitigation measure assuming that all equipment met U.S. EPA Tier 4 Final engines standards and temporary power line was provided for the cranes and generators to be powered electrically. With the implementation of *Mitigation Measure AQ-2*, the project cancer risk levels and annual $PM_{2.5}$ concentrations would be substantially reduced such that they would not exceed the BAAQMD single-source significance thresholds. The computed maximum increased cancer risk to nearby residential areas from construction, assuming infant exposure, would be 3.2 in one million or less and the maximum annual $PM_{2.5}$ concentration would be reduced to 0.028 $\mu g/m^3$.

Mitigation Measures AQ-1 and *AQ-2* represent the best available measures to reduce project construction period emissions.

Operational Period Emissions

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

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 full year of operation would be 2022 if construction begins in January of 2021. Emissions associated with build-out later than 2022 would be lower than those estimated for 2022.

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate for Shopping Center (Institute of Transportation Engineers Land Use Code 820) were provided by the traffic consultant.[7] Saturday and Sunday trip rates were assumed to be the weekday rate adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate. The default trip lengths and trip types specified by CalEEMod were used.

EMFAC2017 Adjustment

As previously described, the vehicle emission factors and fleet mix used in CalEEMod are based on EMFAC2014, which is an older CARB emission model for on-road and off-road mobile sources. Since the release of CalEEMod Version 2016.3.2, a new emission model has been produced by CARB. EMFAC2017 became available for use in March 2018 and approved by the EPA in August 2019. It includes the latest data on California's car and truck fleets and travel activity. Additionally, CARB has recently released EMFAC off-model adjustment factors to account for the Safer Affordable Efficient (SAFE) Vehicle Rule Part One.[8,9] The SAFE vehicle Rule Part One revoked California's authority to set its own GHG emission standards and set zero emission vehicle mandates in California. As a result of this ruling, mobile criteria pollutant emissions and GHG emissions (i.e., CO_2) would increase for light-duty vehicles. Therefore, the CalEEMod vehicle emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2017, which were adjusted with the CARB EMFAC off-model adjustment factors. On-road emission rates for Santa Clara County, calendar year 2022 were used. More

[7] Hexagon Transportation Consultants, Inc., email from applicant received on June 26, 2020.
[8] California Air Resource Board, 2019. *EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One.* November. Web: https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf
[9] California Air Resource Board, 2020. *EMFAC Off-Model Adjustment Factors for Carbon Dioxide (CO_20 Emissions to Accounts for the SAFE Vehicles Rule Part One and the Final SAFE Rule*. June. Web: https://ww3.arb.ca.gov/msei/emfac_off_model_co2_adjustment_factors_06262020-final.pdf?utm_medium=email&utm_source=govdelivery

details about the updates in emissions calculation methodologies and data are available in the EMFAC2017 Technical Support documents.[10]

Energy

CalEEMod defaults for energy use were used, which include the 2016 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The electricity produced emission rate was modified in CalEEMod. CalEEMod has a default emission factor of 641.3 pounds of CO_2 per megawatt of electricity produced, which is based on Pacific Gas and Electric's (PG&E) 2008 emissions rate. However, PG&E published in 2019 emissions rates for 2010 through 2017, which showed the emission rate for delivered electricity had been reduced to 210 pounds CO_2 per megawatt of electricity delivered in the year 2017.[11] This intensity factor was used in the model and it was assumed that all powered was supplied by PG&E. However, the project could use electricity supplied by San Jose Clean Energy (SJCE) that will be 100-percent carbon free by 2021 before the project becomes operational.[12]

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project. Water/wastewater use was changed to 100% aerobic conditions to represent wastewater treatment plant conditions.

Existing Uses

A CalEEMod model run was not developed to estimate emissions from the existing land uses as the property is currently vacant, with no existing structures on it. Therefore, existing operational emissions for the parcel were assumed to be zero.

Summary of Computed Operational Period Emissions

Annual emissions were predicted using CalEEMod and daily emissions were estimating assuming 365 days of operation. Table 4 shows average daily emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the project. The operational period emissions would not exceed the BAAQMD significance thresholds.

[10] See CARB 2018: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac

[11] PG&E, 2019. *Corporate Responsibility and Sustainability Report*. Web: http://www.pgecorp.com/corp_responsibility/reports/2019/assets/PGE_CRSR_2019.pdf

[12] Kerrie Romanow and Rosalynn Hughey, 2019. *Building reach Code for New Construction Memorandum*. August. Web: https://sanjose.legistar.com/LegislationDetail.aspx?ID=4090015&GUID=278596A7-1A2B-4248-B794-7A34E2279E85

Table 4. Operational Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2022 Project Operational Emissions (*tons/year*)	0.73 tons	0.69 tons	0.79 tons	0.22 tons
2022 Existing Site Operational Emissions (*tons/year*)	0.00 tons	0.00 tons	0.00 tons	0.00 tons
Net Annual Emissions (*tons/year*)	0.73 tons	0.69 tons	0.79 tons	0.22 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]	4.0 lbs.	3.8 lbs.	4.3 lbs.	1.2 lbs.
BAAQMD Thresholds (lbs./day)	*54 lbs.*	*54 lbs.*	*82 lbs.*	*54 lbs.*
Exceed Threshold?	No	No	No	No

Notes: [1] Assumes 365-day operation.

Impact: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new source of TACs during construction and operation with the potential to adversely affect existing sensitive receptors in the project vicinity or by introducing a new sensitive receptor, such as residents, in proximity to an existing source of TACs.

Project construction activity would generate dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors. A construction community 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, such as generators powered by diesel engines. Emissions from automobile traffic generated by the project would be spread out over a broad geographical area and not localized.

The project is adjacent to the intersection of Berryessa Road with N. Jackson Avenue and Flickinger Avenue. These roadways have average daily traffic (ADT) volumes in excess of 10,000 vehicles and are therefore considered existing sources of TACs in the vicinity of the project. The impact of these existing roadways upon the existing sensitive receptors was assessed. No other stationary sources of TAC emissions are located within 1,000 feet of the project site.

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

Project Construction Activity

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. Although it was concluded in the previous sections (see Table 3) that construction exhaust air pollutant emissions would not contribute substantially to existing or projected air quality violations, construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issue associated with

construction emissions are cancer risk and exposure to $PM_{2.5}$. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[13]

Construction Period Emissions

The CalEEMod model provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and EMFAC2017 was used to estimate exhaust emissions from on-road vehicles. Total DPM emissions from the construction site was estimated to be 0.109 tons (218 pounds). The on-road emissions are a result of haul truck travel during grading activities, worker travel, and vendor deliveries during construction. A trip length of a mile was used to represent vehicle travel while at or near the construction site. It was assumed emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were estimated to be 0.011 tons (22 pounds) using the same methods and assumptions used to estimate site DPM emissions.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (i.e., residents, school children, elderly) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling ambient impacts of these types of emission activities for CEQA projects.[14] 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 19.7 feet (6 meters) was used. 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 6.6 feet (2 meters) was used. Emissions from the construction equipment and on-site vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7:00 a.m. to 4:00 p.m. when most of the site activity would occur.

The modeling used a five-year data set (2013-2017) of hourly meteorological data from San José Airport that was prepared for use with the AERMOD model by BAAQMD. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the construction period (January 2021through January 2022) were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors. Receptor heights of 5 feet (1.5 meters), 14.9 feet (4.55 meters), and 24.9 feet (7.6 meter) were used to represent the breathing heights at the nearby single-family and multi-family residences, as appropriate.

<u>Project Construction Community Risk Impacts</u>

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)

[13] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.
[14] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.

to find the maximally exposed individuals (MEIs). Using the maximum annual modeled DPM concentrations, the maximum increased cancer risks were calculated using BAAQMD recommended methods and exposure parameters described in *Attachment 1*. Non-cancer health hazards and maximum annual $PM_{2.5}$ concentrations were also calculated and identified. *Attachment 4* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Results of this assessment indicated that the construction MEI was located on the second floor of a multi-family residence adjacent to the eastern boundary of the project site (seen in Figure 1). The unmitigated maximum increased cancer risks and maximum $PM_{2.5}$ concentration from construction during 2021-2022 exceed the BAAQMD single-source thresholds of greater than 10.0 per million for cancer risk and greater than 0.3 $\mu g/m^3$ for annual $PM_{2.5}$ concentration. However, with the incorporation of *Mitigation Measures AQ-1 and AQ-2,* the mitigated increased project cancer risk and $PM_{2.5}$ concentration would not exceed their single-source thresholds. Both the unmitigated and mitigated non-cancer hazards from construction activities would be below the single-source significance threshold of 1.0. Table 5 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities affecting the off-site residential MEI.

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

Table 5. Construction Risk Impacts at the Off-site Residential MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction	Unmitigated	**82.7 (infant)**	**0.51**	0.09
	Mitigated*	3.2 (infant)	0.03	<0.01
	BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	Unmitigated	***Yes***	***Yes***	*No*
	Mitigated*	*No*	*No*	*No*

* AQ-2 Mitigation Measure includes construction equipment engines with Tier 4 Final emissions limits, no diesel generators, and electric cranes.

Combined Impact of All TAC Sources on the Off-Site Construction MEI

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of the project site (i.e. influence area). These sources include railroads, freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that traffic on Berryessa Road, N. Jackson Avenue, and Flickinger Avenue exceeds 10,000 ADT. All other roadways within the area are below 10,000 ADT. No stationary sources of TACs are located within the 1,000-foot influence area according to BAAQMD's stationary source website map. Figure 2 shows the existing TAC sources affecting the project site. Community risk impacts from these sources upon the MEI are reported in Table 6. Details of the modeling and community risk calculations are included in *Attachment 5.*

Local Roadways – Berryessa Road, N. Jackson Avenue, and Flickinger Avenue

The project site and construction MEI are near the intersection of Berryessa Road with N. Jackson Avenue and Flickinger Avenue, with the construction MEI located approximately 357 feet northeast of the intersection. A refined analysis of the impacts of TACs and $PM_{2.5}$ from these local roadways on the construction MEI is necessary to evaluate potential cancer risks and $PM_{2.5}$ concentrations associated with them. A review of the a.m. and p.m. traffic information provided by the project's traffic consultant[15] indicates that Berryessa has an estimated weekday traffic volume of almost 32,000 vehicles per day east of the intersection and approximately 26,000 vehicles per day west of the intersection. N. Jackson Avenue has an estimated volume of approximately 17,500 vehicle per day near the site, while Flickinger Avenue has approximately 12,000 vehicles per day. These traffic volume estimates were increased one percent to obtain 2021 traffic volumes. 2022 traffic volume estimates were obtained from the cumulative traffic estimates (existing plus development) provided by the traffic consultant. California Department of Transportation (Caltrans) data for Interstate 680 (I-680) closest to the project site were used to obtain hourly traffic volume distributions. Default emissions model (CT-EMFAC2017) truck percentages were used (6.1 percent trucks), of which 2.6 percent are considered medium duty trucks and 3.5 percent are diesel heavy duty trucks.

[15] Hexagon Transportation Consultants, Inc., via email sent on June 26, 2020.

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

Modeling Local Roadway Emissions

Analysis of the nearby roadways involved developing emissions estimates of DPM, organic TACs (as TOG), and $PM_{2.5}$ emissions for 2021 and 2022 traffic volume estimates using the Caltrans version of the CARB's EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (e.g., TOG), running evaporative losses for TOG, and fugitive road dust for $PM_{2.5}$ that includes tire and brake wear emissions. In general, vehicle fleet emissions are projected to decrease in the future as reflected in the CT-EMFAC2017 emissions estimates. Inputs to the emissions model include region (i.e., Santa Clara County), type of road (i.e., major/collector), traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (i.e., 2021 and 2022), and season (i.e., annual).

Full operation of the Berryessa Plaza development is assumed to occur in 2022 or later with construction occurring in 2021. In order to estimate TAC and $PM_{2.5}$ emissions over a 30-year exposure period used for calculating increased cancer risks to the construction MEI from traffic on Berryessa Road, N. Jackson Avenue, and Flickinger Avenue, the CT-EMFAC2017 model was used to develop vehicle emission factors for the years 2021 and 2022 using the mix of vehicles in Santa Clara County. 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 produced by CT-EMFAC2017. Year 2022 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated (30 years), since, as discussed above, overall vehicle emissions, in particular diesel truck emissions will decrease in the future. Traffic volumes were grown from 2020 estimates to 2021 assuming an increase of one percent per year. 2022 traffic in the vicinity of the project was assumed to increase by more than one percent given the cumulative traffic volume estimates provided by the traffic consultant[16]. Hourly traffic distributions specific for each roadway were obtained by averaging 2019 hourly traffic volumes from I-680 using Caltrans Performance Measurement System (PeMS). PeMS data is collected in real-time from nearly 40,000 individual detectors spanning the freeway system across all major metropolitan areas of California.[17] The fraction of traffic volume each hour was calculated and applied to the traffic estimates for each roadway to obtain hourly traffic emission rates.

For all hours of the day, other than during peak a.m. and p.m. periods, an average speed of 40 mph was assumed for Berryessa Road and Flickinger Avenue, while 35 mph was assumed for N. Jackson Avenue. Traffic speeds during the peak a.m. and p.m. periods were assumed to be 5 miles per hour slower, or 35 mph for Berryessa Road and Flickinger Avenue and 30 mph for N. Jackson Avenue.

Hourly emissions rates were developed for DPM, organic TACs, and $PM_{2.5}$ emissions for 2021 and 2022 traffic along the applicable segments of each roadway within approximately 1,000 feet of the project site. TAC and $PM_{2.5}$ concentrations at the construction MEI location were developed using these emissions rates with an air quality dispersion model (AERMOD). Maximum increased lifetime cancer risks and maximum annual $PM_{2.5}$ concentrations for the receptors were then computed using modeled TAC and $PM_{2.5}$ concentrations and BAAQMD methods and exposure parameters described in *Attachment 1*.

Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the U.S. EPA AERMOD dispersion model, which is recommended by the BAAQMD for this type of analysis. Roadway traffic within approximately 1,000 feet of the project site was evaluated with the model. Emissions from vehicle traffic were modeled using a series of area sources along a line (line area sources), with line segments used to represent travel lanes. The modeling used a five-year data set (2013-2017) of hourly meteorological data from the San José Airport in San José, California prepared by the BAAQMD for use with the AERMOD model. Other inputs to the model included road geometry and elevations, hourly traffic emissions, and receptor locations and heights. Figure 2 shows the roadway links used for the modeling and receptor locations where concentrations were calculated.

Computed Cancer and Non-Cancer Health Impacts of Local Roadways

The maximum increased cancer risk associated with Berryessa Road at the construction MEI receptor would be 4.6 in one million, the maximum $PM_{2.5}$ concentration at the construction MEI

[16] Hexagon Transportation Consultants, Inc., via email sent on June 26, 2020.
[17] https://dot.ca.gov/programs/traffic-operations/mpr/pems-source

receptor would be 0.19 μg/m^3, and the HI at the construction MEI location would be less than 0.01. Likewise, the maximum increased cancer risk associated with N. Jackson Avenue and Flickinger Avenue at the construction MEI receptor would be 2.0 in one million and 0.9 in one million, respectively. Maximum annual $PM_{2.5}$ concentrations from N. Jackson Avenue and Flickinger Avenue at the construction MEI receptor would be 0.08 μg/m^3 and 0.03 μg/m^3. The HI at the construction MEI location would be less than 0.01 for either roadway. The risk impacts from these roadways on the construction MEI are shown in Table 6. Details of the emission calculations, dispersion modeling and cancer risk calculations for the receptor with the maximum cancer risk from local roadway traffic are provided in *Attachment 5.*

Stationary Sources

Permitted stationary sources of air pollution near the project site are identified using BAAQMD's *Permitted Stationary Sources 2018* GIS website,[18] which provides the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance. No stationary sources are within the 1,000-foot influence area of the project site according to website. Therefore, no stationary sources of TACs were included in the analysis.

Combined Community Health Risk at Off-Site Construction MEI

Table 6 reports both the project and cumulative community risk impacts at the sensitive receptors most affected by construction (i.e. the MEI). Without mitigation, the project's community risk from project construction activities would exceed the single-source maximum cancer risk and $PM_{2.5}$ concentration significance thresholds but would not exceed the HI significance threshold. With the incorporation of *Mitigation Measures AQ-1 and AQ-2*, the project does not exceed single-source thresholds. Cumulative annual $PM_{2.5}$ concentration would exceed the significance threshold of less than 0.8 μg/m^3 for the unmitigated condition, while unmitigated cancer risk and hazard risk would not exceed their thresholds. The mitigated cumulative cancer risk, annual $PM_{2.5}$ concentration, and hazard risk would not exceed cumulative significance thresholds.

[18] BAAQMD, Permitted Stationary Sources 2018 GIS website
https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

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

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction Impacts				
Project Construction	Unmitigated	**82.7 (infant)**	**0.51**	0.09
	Mitigated*	3.2 (infant)	0.03	<0.01
BAAQMD Single-Source Threshold		***>10.0***	***>0.3***	***>1.0***
Exceed Single Source Threshold?	Unmitigated	***Yes***	***Yes***	*No*
	Mitigated*	*No*	*No*	*No*
Cumulative Impacts				
Berryessa Road		4.6	0.19	<0.01
N. Jackson Avenue		2.0	0.08	<0.01
Flickinger Avenue		0.9	0.03	<0.01
Cumulative Total	Unmitigated	90.2	0.81	<0.10
	Mitigated*	10.7	0.33	<0.04
BAAQMD Cumulative Source Threshold		***>100***	***>0.8***	***>10.0***
Exceed Cumulative Source Threshold?	Unmitigated	*No*	***Yes***	*No*
	Mitigated*	*No*	*No*	*No*

* AQ-2 Mitigation Measure includes construction equipment engines with Tier 4 Final emissions limits, no diesel generators, and electric cranes.

Effectiveness of Mitigation Measure AQ-2

With the implementation of *Mitigation Measure AQ-2*, the project cancer risk levels and annual $PM_{2.5}$ concentrations would be substantially reduced such that they would not exceed the BAAQMD single-source significance thresholds. A plan that reduces DPM emissions by a fleet-wide average 88-percent or greater would reduce project-caused increases to cancer risk from 82.7 in one million to 3.2 in one million and reduce annual maximum $PM_{2.5}$ concentrations from 0.51 $\mu g/m^3$ to 0.03 $\mu g/m^3$.

Impact: Create objectionable odors affecting a substantial number of people?

The project would generate localized emissions of diesel exhaust during construction equipment operation and truck activity. These emissions may be noticeable from time to time by adjacent receptors. However, they would be localized and are not likely to adversely affect people off-site by resulting in confirmed odor complaints. The project would not include any sources of significant odors that would cause complaints from surrounding uses.

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, CH_4, 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 for GHG Emissions

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

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

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

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

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

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, due to the economic downturn, to 545 MMT of CO_2e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_2e. Thus, an estimated reduction of 80 MMT of CO_2e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

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

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (SB) 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*.[19] While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts,

[19] California Air Resource Board, 2017. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Targets.* November. Web: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf

and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

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 bikeable 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.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal.

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

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan

planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

Senate Bill 350 - Renewable Portfolio Standards

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

Senate Bill 100 – Current Renewable Portfolio Standards

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

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

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.[20] The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1,2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.[21]

[20] See: https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020.
[21] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2018, total gross nationwide GHG emissions were 6,676.6 million metric tons (MMT) carbon dioxide equivalent (CO_2e).[22] These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission inventory on an annual basis where the latest inventory includes 2000 through 2017 emissions.[23] In 2017, GHG emissions from statewide emitting activities were 424 MMT. The 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMT below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 MT per person to 10.7 MT per person in 2017. The most recent Bay Area emission inventory was computed for the year 2011.[24] The Bay Area GHG emission were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011.

Climate Smart San José and Reach Code

Climate Smart San José is a plan to reduce air pollution, save water, and create a stronger and healthier community. The City approved goals and milestones in February 2018 to ensure the City can substantially reduce GHG emissions through reaching the following goals and milestones:

- All new residential buildings will be Zero Net Carbon Emissions (ZNE) by 2020 and all new commercial buildings will be ZNE by 2030 (Note that ZNE buildings would be all electric with a carbon-free electricity source).
- San Jose Clean Energy (SJCE) will provide 100-percent carbon-free base power by 2021.
- One gigawatt of solar power will be installed in San Jose by 2040.
- 61 percent of passenger vehicles will be powered by electricity by 2030.

The California Energy Commission (CEC) updates the California Building Energy Efficiency Standards every three years, in alignment with the California Code of regulations. Title 24 Parts 6 and 11 of the California Building Energy Efficiency Standards and the California Green Building Standards Code (CALGreen) address the need for regulations to improve energy efficiency and combat climate change. The 2019 CAL Green standards include substantial changes intended to increase the energy efficiency of buildings. For example, the code encourages the installation of solar and heat pump water heaters in low-rise residential buildings. The 2019 California Code went before City Council in October 2019 for approval, with an effective date of January 1, 2020. As part of this action, the City adopted a "reach code" that requires development projects to exceed the minimum Building Energy Efficiency requirements.[25] The City's reach code applies only to new residential and non-residential construction in San José. It incentivizes all-electric

[22] United States Environmental Protection Agency, 2020. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018*. April. Web: https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf

[23] CARB. 2019. *2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017*. Web: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf

[24] BAAQMD. 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. January. Web: http://www.baaqmd.gov/~/media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf accessed Nov. 26, 2019.

[25] City of San Jose Transportation and Environmental Committee, *Building Reach Code for New Construction Memorandum,* August 2019.

construction, requires increased energy efficiency and electrification-readiness for those choosing to maintain the presence of natural gas. The code requires that non-residential construction include solar readiness. It also requires additional EV charging readiness and/or electric vehicle service equipment (EVSE) installation for all development types.

San José 2030 Greenhouse Gas Reduction Strategy

The 2030 Greenhouse Gas Reduction Strategy (GHGRS)[26] is a comprehensive update to the City of San José's original GHGRS and builds on the Envision San José 2040 General Plan and Climate Smart San José [2018], which expanded the City's Green Vision to advance the City towards urban sustainability and reduce GHG emissions through a combination of City initiatives. It was prepared by the City to build on the goals of the previous GHGRS and to further the strategies embedded in other City plans to align with the state's 2030 GHG target (SB 32) and with consideration for the state's long-term emissions goal. The 2030 GHGRS proposes strategies designed to reduce the City's GHG emissions levels to 40 percent below 1990 levels by the year 2030 to meet the long-term target of carbon neutrality by 2045 [Executive Order B-55-18]. The 2030 GHGRS does not have a specific metric ton GHG threshold for project-level construction or operation. The 2030 GHGRS did develop an interim emissions reduction target of 2.94 MT CO_2e/Service Population by 2030, which was derived through guidance from CARB and OPR to demonstrate consistency with the state's adopted 2030 GHG target (SB 32). Service population (SP) is defined as the number of residents plus the number of people working within San José.

Significance Thresholds

The 2030 GHGRS serves as a Qualified Climate Action Plan for purposes of tiering and streamlining under the CEQA. A Development Compliance Checklist serves to apply the relevant General Plan and 2030 GHGRS policies through a streamlined review process for proposed new development projects that are subject to discretionary review and that trigger environmental review under the CEQA. Conformance of the Development Compliance Checklist would mean the project plans to include GHG reduction measures as part of the project, complying with the City's GHG reduction goals, and would then not have an exceedance of GHG emissions. *Attachment 6* includes the 2030 GHGRS Development Compliance Checklist.

Impact: 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 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.

[26] City of San José. *2030 Greenhouse Gas Reduction Strategy*. August 2020. Web: https://www.sanjoseca.gov/Home/ShowDocument?id=63605

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 previously described. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future full-time employees. The number of future employees is based on a rate of one employee per 250 square feet.[27] Using this rate and 47,000 sf of retail use, the number of future employees, and service population, would be 188 employees.

Construction Emissions

GHG emissions associated with construction were computed to be 358 MT of CO_2e for the 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. Effects from any project-specific sustainability measures were not included in this analysis as they have not been developed yet. As shown in Table 7, the net annual emissions resulting from operation of the proposed project are predicted to be 728 MT of CO_{2e} in 2030. The service population emission for 2030 is predicted to be 3.9 MT/CO_{2e}/year/service population. Most of the emissions would be caused by customers traveling to and from the project site.

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

Source Category	Proposed Project
	2030
Area	0
Energy Consumption	57
Mobile	642
Solid Waste Generation	25
Water Usage	5
Metric Ton Total (MT CO_{2e}/year)	**729**
Service Population Emissions (MT CO_{2e}/year/SP)	**3.9**

The impact of GHG emissions was addressed in the *Envisions San José 2040 General Plan* Draft Program EIR. The City of San José concluded that the build-out of the 2040 General Plan would

[27] Strategic Economics, Inc., 2016. *San Jose market Overview and Employment Land Analysis*. January.

have significant and unavoidable GHG emissions beyond 2020.[28] Therefore, this project would not contribute or result in a new GHG impact that has not already been identified. In addition, the project is intending to complete and comply with the City's 2030 GHGRS Development Compliance Checklist, which would facilitate GHG reduction strategies approved by the City to reduce the project's GHG emissions. Some of these GHG reduction strategies which could be incorporated with this project include the following:

- Implement green building measures through construction techniques and architectural design,
- Encourage the installation of solar panels or other clean energy power generation,
- Include electric vehicle charging stations,
- Develop a transportation demand management program to reduce the vehicle trips and vehicle miles generated by the project, and
- Include water and waste reduction features.

[28] City of San Jose, 2011. "3.15.6 Mitigation and Avoidance Measures for Greenhouse Gas Emission Impacts", *Draft Program Environmental Impact Report for the Envisions San José 2040 General Plan*. June. Web: https://www.sanjoseca.gov/home/showdocument?id=22041

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 modeling assumptions and output for project construction and operational criteria air pollutant and GHG emissions. The operational outputs for existing and 2030 uses are also included in this attachment.

Attachment 3 includes the EMFAC2017 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 4 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 5 includes the cumulative community risk calculations, modeling results, and health risk calculations from sources affecting the construction MEIs.

Attachment 6 includes the 2030 GHGRS Development Compliance Checklist.

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.[29] 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.[30] This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[31] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

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

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day) or liters per kilogram of body weight per 8-hour period for the case of worker or school child exposures. As recommended by the BAAQMD for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile 8-hour breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults,

[29] 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.
[30] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[31] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

a 25-year exposure period is recommended by the BAAQMD. For school children a 9-year exposure period is recommended by the BAAQMD.

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

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

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)
8HrBR = 8-hour breathing rate (L/kg body weight-8 hours)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

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

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

Parameter	*Exposure Type* →	Infant		Child	Adult
	Age Range →	3rd Trimester	0<2	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
Daily Breathing Rate (L/kg-day) 80th Percentile Rate		273	758	572	261
Daily Breathing Rate (L/kg-day) 95th Percentile Rate		361	1,090	745	335
8-hour Breathing Rate (L/kg-8 hours) 95th Percentile Rate		-	1,200	520	240
Inhalation Absorption Factor		1	1	1	1
Averaging Time (years)		70	70	70	70
Exposure Duration (years)		0.25	2	14	14*
Exposure Frequency (days/year)		350	350	350	350*
Age Sensitivity Factor		10	10	3	1
Fraction of Time at Home (FAH)		0.85-1.0	0.85-1.0	0.72-1.0	0.73*

Non-Cancer Hazards

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

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

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

Berryessa Plaza, San Jose

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	200.00	Space	0.00	73,226.00	0
Strip Mall	47.00	1000sqft	2.76	47,000.00	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)	210	**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 CO2 rate = 210

Land Use - Provided site plan land uses, based on 2.76 acre site. Retail land use consistent with trip gen rate provided by client.

Construction Phase - default construction schedule, trenching added

Off-road Equipment -

Off-road Equipment - per default construction data sheet

Off-road Equipment - Default construction equip & hours

Off-road Equipment - Per Default Construction data sheet

Off-road Equipment -

Off-road Equipment - Per Default Construction Data Sheet

Off-road Equipment - trenching added

Off-road Equipment - Per Default Construction Data Sheet

Trips and VMT - Concrete and asphalt haul trips estimated using plans provided and depth assumptions. Trip lengths for these asumed to be vendor length

Demolition - Site is bare ground

Grading - Assumed balanced site, no soil import/export. Site is 2.76 acres

Architectural Coating - Estimate from plans

Vehicle Trips - Week Daily trips for development estimated to be 1,489 based on ITE 820 (Shopping Center) and reductions from location and passby.

Vehicle Emission Factors - EMFAC2017 EFs for 2022 Santa Clara Co.

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Water And Wastewater - Assume 100% WWTP

Construction Off-road Equipment Mitigation - T3L3 mitigation with Basic BMPs for dust

Table Name	Column Name	Default Value	New Value
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tblVehicleEF	LDT1	2.0980e-003	1.7530e-003
tblVehicleEF	LDT1	2.7890e-003	2.2060e-003

tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.22	0.17
tblVehicleEF	LDT1	0.07	0.07
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.16	0.62
tblVehicleEF	LDT1	0.17	0.34
tblVehicleEF	LDT1	3.0420e-003	2.5990e-003
tblVehicleEF	LDT1	7.4800e-004	0.00
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.22	0.17
tblVehicleEF	LDT1	0.07	0.07
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.16	0.62
tblVehicleEF	LDT1	0.19	0.37
tblVehicleEF	LDT2	5.4440e-003	3.6070e-003
tblVehicleEF	LDT2	7.2650e-003	0.07
tblVehicleEF	LDT2	0.73	0.85
tblVehicleEF	LDT2	1.56	2.87
tblVehicleEF	LDT2	344.90	326.17
tblVehicleEF	LDT2	80.03	70.58
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.12	0.29
tblVehicleEF	LDT2	1.6350e-003	1.4360e-003
tblVehicleEF	LDT2	2.2540e-003	1.7980e-003
tblVehicleEF	LDT2	1.5040e-003	1.3220e-003
tblVehicleEF	LDT2	2.0730e-003	1.6530e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.01	0.01

tblVehicleEF	LDT2	0.07	0.43
tblVehicleEF	LDT2	0.10	0.33
tblVehicleEF	LDT2	3.4540e-003	0.01
tblVehicleEF	LDT2	8.2700e-004	9.1000e-005
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.43
tblVehicleEF	LDT2	0.11	0.36
tblVehicleEF	LHD1	5.6090e-003	5.3430e-003
tblVehicleEF	LHD1	0.02	9.3450e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	1.10	0.84
tblVehicleEF	LHD1	2.75	1.13
tblVehicleEF	LHD1	8.98	9.02
tblVehicleEF	LHD1	696.09	808.85
tblVehicleEF	LHD1	33.08	12.12
tblVehicleEF	LHD1	0.07	0.06
tblVehicleEF	LHD1	1.21	0.82
tblVehicleEF	LHD1	1.04	0.34
tblVehicleEF	LHD1	8.6100e-004	8.0800e-004
tblVehicleEF	LHD1	0.01	9.7110e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	1.0070e-003	2.7000e-004
tblVehicleEF	LHD1	8.2400e-004	7.7300e-004
tblVehicleEF	LHD1	2.5070e-003	2.4280e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.2600e-004	2.4800e-004

tblVehicleEF	LHD1	2.7290e-003	2.1470e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.3770e-003	1.0820e-003
tblVehicleEF	LHD1	0.12	0.10
tblVehicleEF	LHD1	0.33	0.55
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.0000e-005	8.8000e-005
tblVehicleEF	LHD1	6.8380e-003	7.9010e-003
tblVehicleEF	LHD1	3.8300e-004	1.2000e-004
tblVehicleEF	LHD1	2.7290e-003	2.1470e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.3770e-003	1.0820e-003
tblVehicleEF	LHD1	0.15	0.12
tblVehicleEF	LHD1	0.33	0.55
tblVehicleEF	LHD1	0.31	0.09
tblVehicleEF	LHD2	3.5690e-003	3.2840e-003
tblVehicleEF	LHD2	8.3070e-003	7.5540e-003
tblVehicleEF	LHD2	7.6510e-003	9.2300e-003
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.59	0.66
tblVehicleEF	LHD2	1.25	0.67
tblVehicleEF	LHD2	14.03	14.10
tblVehicleEF	LHD2	712.64	782.55
tblVehicleEF	LHD2	24.58	8.09
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.81	1.00
tblVehicleEF	LHD2	0.48	0.19
tblVehicleEF	LHD2	1.2710e-003	1.4080e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	4.4000e-004	1.4100e-004
tblVehicleEF	LHD2	1.2160e-003	1.3470e-003
tblVehicleEF	LHD2	2.6860e-003	2.6820e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	4.0400e-004	1.3000e-004
tblVehicleEF	LHD2	8.9800e-004	1.1650e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	4.7100e-004	5.8300e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.08	0.31
tblVehicleEF	LHD2	0.10	0.05
tblVehicleEF	LHD2	1.3700e-004	1.3500e-004
tblVehicleEF	LHD2	6.9320e-003	7.5590e-003
tblVehicleEF	LHD2	2.6800e-004	8.0000e-005
tblVehicleEF	LHD2	8.9800e-004	1.1650e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.7100e-004	5.8300e-004
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.08	0.31
tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	MCY	0.44	0.33
tblVehicleEF	MCY	0.16	0.26
tblVehicleEF	MCY	19.05	19.19
tblVehicleEF	MCY	10.16	9.00
tblVehicleEF	MCY	169.25	210.27
tblVehicleEF	MCY	45.57	61.40

tblVehicleEF	MCY	1.15	1.15
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	1.9790e-003	1.9370e-003
tblVehicleEF	MCY	3.9070e-003	3.1610e-003
tblVehicleEF	MCY	1.8510e-003	1.8120e-003
tblVehicleEF	MCY	3.6840e-003	2.9780e-003
tblVehicleEF	MCY	0.91	1.82
tblVehicleEF	MCY	0.71	0.70
tblVehicleEF	MCY	0.50	1.00
tblVehicleEF	MCY	2.22	2.23
tblVehicleEF	MCY	0.62	2.06
tblVehicleEF	MCY	2.21	1.95
tblVehicleEF	MCY	2.0690e-003	2.0810e-003
tblVehicleEF	MCY	6.8700e-004	6.0800e-004
tblVehicleEF	MCY	0.91	1.82
tblVehicleEF	MCY	0.71	0.70
tblVehicleEF	MCY	0.50	1.00
tblVehicleEF	MCY	2.75	2.75
tblVehicleEF	MCY	0.62	2.06
tblVehicleEF	MCY	2.41	2.13
tblVehicleEF	MDV	0.01	4.4780e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.16	0.95
tblVehicleEF	MDV	2.96	3.30
tblVehicleEF	MDV	459.29	395.09
tblVehicleEF	MDV	104.69	84.62
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.26	0.36
tblVehicleEF	MDV	1.8300e-003	1.5890e-003
tblVehicleEF	MDV	2.5220e-003	2.0110e-003

tblVehicleEF	MDV	1.6870e-003	1.4660e-003
tblVehicleEF	MDV	2.3200e-003	1.8500e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.17	0.14
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.23	0.42
tblVehicleEF	MDV	4.6000e-003	3.8800e-003
tblVehicleEF	MDV	1.0990e-003	8.3200e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.17	0.14
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	2.40	1.34
tblVehicleEF	MH	6.10	2.25
tblVehicleEF	MH	1,217.52	1,557.00
tblVehicleEF	MH	59.35	19.21
tblVehicleEF	MH	1.39	1.43
tblVehicleEF	MH	0.86	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.2090e-003	2.9100e-004
tblVehicleEF	MH	3.2170e-003	3.2700e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.1120e-003	2.6800e-004

tblVehicleEF	MH	0.89	0.79
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.31	0.27
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.02	1.59
tblVehicleEF	MH	0.35	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	7.0000e-004	1.9000e-004
tblVehicleEF	MH	0.89	0.79
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.31	0.27
tblVehicleEF	MH	0.15	0.10
tblVehicleEF	MH	0.02	1.59
tblVehicleEF	MH	0.38	0.11
tblVehicleEF	MHD	0.02	3.4370e-003
tblVehicleEF	MHD	5.7650e-003	5.6390e-003
tblVehicleEF	MHD	0.05	9.4480e-003
tblVehicleEF	MHD	0.40	0.37
tblVehicleEF	MHD	0.42	0.48
tblVehicleEF	MHD	6.48	1.16
tblVehicleEF	MHD	137.16	75.81
tblVehicleEF	MHD	1,201.31	1,131.31
tblVehicleEF	MHD	61.41	9.18
tblVehicleEF	MHD	0.54	0.56
tblVehicleEF	MHD	1.54	2.06
tblVehicleEF	MHD	10.30	1.38
tblVehicleEF	MHD	7.6500e-004	1.2350e-003
tblVehicleEF	MHD	6.5420e-003	0.04
tblVehicleEF	MHD	9.3800e-004	1.2000e-004
tblVehicleEF	MHD	7.3200e-004	1.1810e-003

tblVehicleEF	MHD	6.2530e-003	0.04
tblVehicleEF	MHD	8.6200e-004	1.1000e-004
tblVehicleEF	MHD	9.7300e-004	4.4800e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	4.9200e-004	2.2200e-004
tblVehicleEF	MHD	0.06	0.09
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.38	0.05
tblVehicleEF	MHD	1.3210e-003	7.1900e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.2700e-004	9.1000e-005
tblVehicleEF	MHD	9.7300e-004	4.4800e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	4.9200e-004	2.2200e-004
tblVehicleEF	MHD	0.07	0.11
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.42	0.06
tblVehicleEF	OBUS	0.01	7.1700e-003
tblVehicleEF	OBUS	8.1680e-003	5.7850e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.56
tblVehicleEF	OBUS	0.52	0.59
tblVehicleEF	OBUS	5.20	1.92
tblVehicleEF	OBUS	110.09	95.82
tblVehicleEF	OBUS	1,307.90	1,365.97
tblVehicleEF	OBUS	66.90	15.56
tblVehicleEF	OBUS	0.51	0.47
tblVehicleEF	OBUS	1.73	1.73

tblVehicleEF	OBUS	2.82	1.02
tblVehicleEF	OBUS	1.1200e-004	7.1500e-004
tblVehicleEF	OBUS	7.6290e-003	0.02
tblVehicleEF	OBUS	7.7800e-004	1.3700e-004
tblVehicleEF	OBUS	1.0700e-004	6.8400e-004
tblVehicleEF	OBUS	7.2800e-003	0.01
tblVehicleEF	OBUS	7.1600e-004	1.2600e-004
tblVehicleEF	OBUS	1.1690e-003	1.0630e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	5.1000e-004	4.6800e-004
tblVehicleEF	OBUS	0.07	0.06
tblVehicleEF	OBUS	0.03	0.17
tblVehicleEF	OBUS	0.32	0.09
tblVehicleEF	OBUS	1.0620e-003	9.1000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6000e-004	1.5400e-004
tblVehicleEF	OBUS	1.1690e-003	1.0630e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	5.1000e-004	4.6800e-004
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	0.03	0.17
tblVehicleEF	OBUS	0.36	0.10
tblVehicleEF	SBUS	0.84	0.05
tblVehicleEF	SBUS	0.02	6.5710e-003
tblVehicleEF	SBUS	0.08	4.5790e-003
tblVehicleEF	SBUS	8.09	2.08
tblVehicleEF	SBUS	1.13	0.54
tblVehicleEF	SBUS	10.09	0.68

tblVehicleEF	SBUS	1,121.96	347.47
tblVehicleEF	SBUS	1,059.05	1,071.12
tblVehicleEF	SBUS	55.12	3.82
tblVehicleEF	SBUS	9.12	3.61
tblVehicleEF	SBUS	4.06	5.09
tblVehicleEF	SBUS	12.31	0.77
tblVehicleEF	SBUS	9.2300e-003	4.2010e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.8200e-004	4.3000e-005
tblVehicleEF	SBUS	8.8300e-003	4.0190e-003
tblVehicleEF	SBUS	2.6340e-003	2.7350e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.1100e-004	3.9000e-005
tblVehicleEF	SBUS	3.5670e-003	4.9600e-004
tblVehicleEF	SBUS	0.04	4.8020e-003
tblVehicleEF	SBUS	0.96	0.23
tblVehicleEF	SBUS	1.4850e-003	2.0400e-004
tblVehicleEF	SBUS	0.12	0.09
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.50	0.03
tblVehicleEF	SBUS	0.01	3.3050e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	7.2500e-004	3.8000e-005
tblVehicleEF	SBUS	3.5670e-003	4.9600e-004
tblVehicleEF	SBUS	0.04	4.8020e-003
tblVehicleEF	SBUS	1.39	0.33
tblVehicleEF	SBUS	1.4850e-003	2.0400e-004
tblVehicleEF	SBUS	0.15	0.11
tblVehicleEF	SBUS	0.02	0.03

tblVehicleEF	SBUS	0.55	0.03
tblVehicleEF	UBUS	0.27	1.38
tblVehicleEF	UBUS	0.04	2.8070e-003
tblVehicleEF	UBUS	5.18	10.37
tblVehicleEF	UBUS	8.16	0.14
tblVehicleEF	UBUS	2,092.55	1,606.76
tblVehicleEF	UBUS	99.16	1.64
tblVehicleEF	UBUS	10.44	0.73
tblVehicleEF	UBUS	14.91	0.02
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.23	5.2780e-003
tblVehicleEF	UBUS	1.1060e-003	2.0000e-006
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	8.3320e-003
tblVehicleEF	UBUS	0.22	5.0490e-003
tblVehicleEF	UBUS	1.0170e-003	2.0000e-006
tblVehicleEF	UBUS	2.3350e-003	1.9400e-004
tblVehicleEF	UBUS	0.04	2.9870e-003
tblVehicleEF	UBUS	1.1130e-003	1.2200e-004
tblVehicleEF	UBUS	0.66	0.02
tblVehicleEF	UBUS	8.3620e-003	0.02
tblVehicleEF	UBUS	0.57	0.01
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.1370e-003	1.6000e-005
tblVehicleEF	UBUS	2.3350e-003	1.9400e-004
tblVehicleEF	UBUS	0.04	2.9870e-003
tblVehicleEF	UBUS	1.1130e-003	1.2200e-004
tblVehicleEF	UBUS	0.99	1.41
tblVehicleEF	UBUS	8.3620e-003	0.02

tblVehicleEF	UBUS	0.63	0.01
tblVehicleTrips	ST_TR	42.04	30.05
tblVehicleTrips	SU_TR	20.43	14.60
tblVehicleTrips	WD_TR	44.32	31.68
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	SepticTankPercent	10.33	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					
2021	0.7547	2.0682	1.8179	3.1300e-003	0.0210	0.1052	0.1262	0.0103	0.1004	0.1107	0.0000	261.6606	261.6606	0.0539	0.0000	263.0089
2022	4.2400e-003	0.0420	0.0526	8.0000e-005	0.0000	2.2000e-003	2.2000e-003	0.0000	2.0200e-003	2.0200e-003	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348
Maximum	**0.7547**	**2.0682**	**1.8179**	**3.1300e-003**	**0.0210**	**0.1052**	**0.1262**	**0.0103**	**0.1004**	**0.1107**	**0.0000**	**261.6606**	**261.6606**	**0.0539**	**0.0000**	**263.0089**

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					
2021	0.5871	1.6871	1.9342	3.1300e-003	9.4500e-003	0.0151	0.0245	4.6100e-003	0.0151	0.0197	0.0000	261.6603	261.6603	0.0539	0.0000	263.0086
2022	1.8900e-003	0.0398	0.0584	8.0000e-005	0.0000	3.6000e-004	3.6000e-004	0.0000	3.6000e-004	3.6000e-004	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348
Maximum	**0.5871**	**1.6871**	**1.9342**	**3.1300e-003**	**9.4500e-003**	**0.0151**	**0.0245**	**4.6100e-003**	**0.0151**	**0.0197**	**0.0000**	**261.6603**	**261.6603**	**0.0539**	**0.0000**	**263.0086**

	ROG	NOx	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	**22.39**	**18.16**	**-6.53**	**0.00**	**54.98**	**85.64**	**80.63**	**55.02**	**84.94**	**82.22**	**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	1-4-2021	4-3-2021	0.6365	0.4396
2	4-4-2021	7-3-2021	0.5874	0.4659
3	7-4-2021	10-3-2021	0.5938	0.4710
4	10-4-2021	1-3-2022	1.0012	0.8988
5	1-4-2022	4-3-2022	0.0367	0.0331
		Highest	1.0012	0.8988

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	0.2145	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Energy	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	56.2442	56.2442	7.0600e-003	1.5500e-003	56.8814
Mobile	0.5099	0.6842	3.2932	7.7400e-003	0.7802	8.0300e-003	0.7882	0.2087	7.5300e-003	0.2163	0.0000	757.8581	757.8581	0.0452	0.0000	758.9876
Waste						0.0000	0.0000		0.0000	0.0000	10.0176	0.0000	10.0176	0.5920	0.0000	24.8182

Water						0.0000	0.0000		0.0000	0.0000	1.2317	2.5058	3.7375	4.5900e-003	2.7500e-003	4.6717
Total	**0.7250**	**0.6897**	**3.3001**	**7.7700e-003**	**0.7802**	**8.4500e-003**	**0.7887**	**0.2087**	**7.9500e-003**	**0.2167**	**11.2493**	**816.6124**	**827.8617**	**0.6489**	**4.3000e-003**	**845.3636**

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	0.2145	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Energy	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	56.2442	56.2442	7.0600e-003	1.5500e-003	56.8814
Mobile	0.5099	0.6842	3.2932	7.7400e-003	0.7802	8.0300e-003	0.7882	0.2087	7.5300e-003	0.2163	0.0000	757.8581	757.8581	0.0452	0.0000	758.9876
Waste						0.0000	0.0000		0.0000	0.0000	10.0176	0.0000	10.0176	0.5920	0.0000	24.8182
Water						0.0000	0.0000		0.0000	0.0000	1.2317	2.5058	3.7375	4.5900e-003	2.7500e-003	4.6717
Total	**0.7250**	**0.6897**	**3.3001**	**7.7700e-003**	**0.7802**	**8.4500e-003**	**0.7887**	**0.2087**	**7.9500e-003**	**0.2167**	**11.2493**	**816.6124**	**827.8617**	**0.6489**	**4.3000e-003**	**845.3636**

	ROG	NOx	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	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/3/2021	5	3	
3	Grading	Grading	2/4/2021	2/11/2021	5	6	

4	Trenching/Foundation	Trenching	2/4/2021	2/11/2021	5	6	
5	Building Construction	Building Construction	2/12/2021	12/16/2021	5	220	
6	Architectural Coating	Architectural Coating	12/17/2021	12/30/2021	5	10	
7	Paving	Paving	12/31/2021	1/13/2022	5	10	

Acres of Grading (Site Preparation Phase): 2.76

Acres of Grading (Grading Phase): 2.76

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 70,500; Non-Residential Outdoor: 23,500; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching/Foundation	Excavators	1	8.00	158	0.38
Trenching/Foundation	Tractors/Loaders/Backhoes	1	8.00	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	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060

Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6200e-003	0.1210	0.1542	2.4000e-004		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**5.6200e-003**	**0.1210**	**0.1542**	**2.4000e-004**		**1.0800e-003**	**1.0800e-003**		**1.0800e-003**	**1.0800e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

Mitigated Construction Off-Site

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

3.3 Site Preparation - 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					
Fugitive Dust					1.4600e-003	0.0000	1.4600e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3200e-003	0.0274	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.3200e-003**	**0.0274**	**0.0161**	**4.0000e-005**	**1.4600e-003**	**1.0500e-003**	**2.5100e-003**	**1.6000e-004**	**9.7000e-004**	**1.1300e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.6000e-004	0.0000	6.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	0.0178	0.0205	4.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**9.0000e-004**	**0.0178**	**0.0205**	**4.0000e-005**	**6.6000e-004**	**1.1000e-004**	**7.7000e-004**	**7.0000e-005**	**1.1000e-004**	**1.8000e-004**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

Mitigated Construction Off-Site

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

3.4 Grading - 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					
Fugitive Dust					0.0195	0.0000	0.0195	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9900e-003	0.0557	0.0234	5.0000e-005		2.4500e-003	2.4500e-003		2.2600e-003	2.2600e-003	0.0000	4.7146	4.7146	1.5200e-003	0.0000	4.7527
Total	**4.9900e-003**	**0.0557**	**0.0234**	**5.0000e-005**	**0.0195**	**2.4500e-003**	**0.0220**	**0.0101**	**2.2600e-003**	**0.0124**	**0.0000**	**4.7146**	**4.7146**	**1.5200e-003**	**0.0000**	**4.7527**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.7900e-003	0.0000	8.7900e-003	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3100e-003	0.0261	0.0303	5.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	4.7146	4.7146	1.5200e-003	0.0000	4.7527
Total	**1.3100e-003**	**0.0261**	**0.0303**	**5.0000e-005**	**8.7900e-003**	**1.7000e-004**	**8.9600e-003**	**4.5400e-003**	**1.7000e-004**	**4.7100e-003**	**0.0000**	**4.7146**	**4.7146**	**1.5200e-003**	**0.0000**	**4.7527**

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 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	1.2500e-003	0.0122	0.0166	2.0000e-005		6.5000e-004	6.5000e-004		6.0000e-004	6.0000e-004	0.0000	2.1802	2.1802	7.1000e-004	0.0000	2.1978

Total	**1.2500e-003**	**0.0122**	**0.0166**	**2.0000e-005**		**6.5000e-004**	**6.5000e-004**		**6.0000e-004**	**6.0000e-004**	**0.0000**	**2.1802**	**2.1802**	**7.1000e-004**	**0.0000**	**2.1978**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.1000e-004	0.0126	0.0188	2.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	2.1802	2.1802	7.1000e-004	0.0000	2.1978
Total	**6.1000e-004**	**0.0126**	**0.0188**	**2.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**2.1802**	**2.1802**	**7.1000e-004**	**0.0000**	**2.1978**

Mitigated Construction Off-Site

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

3.6 Building Construction - 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	0.2250	1.7630	1.6019	2.7500e-003		0.0899	0.0899		0.0861	0.0861	0.0000	228.4136	228.4136	0.0449	0.0000	229.5371
Total	**0.2250**	**1.7630**	**1.6019**	**2.7500e-003**		**0.0899**	**0.0899**		**0.0861**	**0.0861**	**0.0000**	**228.4136**	**228.4136**	**0.0449**	**0.0000**	**229.5371**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0785	1.4984	1.6949	2.7500e-003		0.0135	0.0135		0.0135	0.0135	0.0000	228.4133	228.4133	0.0449	0.0000	229.5368
Total	**0.0785**	**1.4984**	**1.6949**	**2.7500e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**228.4133**	**228.4133**	**0.0449**	**0.0000**	**229.5368**

Mitigated Construction Off-Site

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

3.7 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	0.4996					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.5007**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4996					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	6.7800e-003	9.1600e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.4999**	**6.7800e-003**	**9.1600e-003**	**1.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

Mitigated Construction Off-Site

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

3.8 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	5.3000e-004	5.3200e-003	5.8900e-003	1.0000e-005		2.9000e-004	2.9000e-004		2.7000e-004	2.7000e-004	0.0000	0.7752	0.7752	2.5000e-004	0.0000	0.7814

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3000e-004**	**5.3200e-003**	**5.8900e-003**	**1.0000e-005**		**2.9000e-004**	**2.9000e-004**		**2.7000e-004**	**2.7000e-004**	**0.0000**	**0.7752**	**0.7752**	**2.5000e-004**	**0.0000**	**0.7814**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1000e-004	4.4300e-003	6.4900e-003	1.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.7752	0.7752	2.5000e-004	0.0000	0.7814
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1000e-004**	**4.4300e-003**	**6.4900e-003**	**1.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.7752**	**0.7752**	**2.5000e-004**	**0.0000**	**0.7814**

Mitigated Construction Off-Site

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

3.8 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2400e-003	0.0420	0.0526	8.0000e-005		2.2000e-003	2.2000e-003		2.0200e-003	2.0200e-003	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2400e-003**	**0.0420**	**0.0526**	**8.0000e-005**		**2.2000e-003**	**2.2000e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**6.9795**	**6.9795**	**2.2100e-003**	**0.0000**	**7.0348**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8900e-003	0.0398	0.0584	8.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.8900e-003**	**0.0398**	**0.0584**	**8.0000e-005**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**6.9795**	**6.9795**	**2.2100e-003**	**0.0000**	**7.0348**

Mitigated Construction Off-Site

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

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	0.5099	0.6842	3.2932	7.7400e-003	0.7802	8.0300e-003	0.7882	0.2087	7.5300e-003	0.2163	0.0000	757.8581	757.8581	0.0452	0.0000	758.9876
Unmitigated	0.5099	0.6842	3.2932	7.7400e-003	0.7802	8.0300e-003	0.7882	0.2087	7.5300e-003	0.2163	0.0000	757.8581	757.8581	0.0452	0.0000	758.9876

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Strip Mall	1,489.00	1,412.40	686.38	2,099,676	2,099,676
Total	1,489.00	1,412.40	686.38	2,099,676	2,099,676

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-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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
Parking Lot	0.589038	0.052546	0.179703	0.107443	0.021069	0.005192	0.013353	0.021839	0.001660	0.001275	0.005191	0.000925	0.000766

Strip Mall	0.589038	0.052546	0.179703	0.107443	0.021069	0.005192	0.013353	0.021839	0.001660	0.001275	0.005191	0.000925	0.000766

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	50.3000	50.3000	6.9500e-003	1.4400e-003	50.9019
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	50.3000	50.3000	6.9500e-003	1.4400e-003	50.9019
NaturalGas Mitigated	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795
NaturalGas Unmitigated	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795

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					
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
Strip Mall	111390	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795

Total		**6.0000e-004**	**5.4600e-003**	**4.5900e-003**	**3.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**5.9442**	**5.9442**	**1.1000e-004**	**1.1000e-004**	**5.9795**

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					
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
Strip Mall	111390	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795
Total		**6.0000e-004**	**5.4600e-003**	**4.5900e-003**	**3.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**5.9442**	**5.9442**	**1.1000e-004**	**1.1000e-004**	**5.9795**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	25629.1	2.4413	3.4000e-004	7.0000e-005	2.4705
Strip Mall	502430	47.8587	6.6100e-003	1.3700e-003	48.4314
Total		**50.3000**	**6.9500e-003**	**1.4400e-003**	**50.9019**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	25629.1	2.4413	3.4000e-004	7.0000e-005	2.4705
Strip Mall	502430	47.8587	6.6100e-003	1.3700e-003	48.4314
Total		**50.3000**	**6.9500e-003**	**1.4400e-003**	**50.9019**

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	0.2145	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Unmitigated	0.2145	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003

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	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1883					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Total	**0.2145**	**2.0000e-005**	**2.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.4100e-003**	**4.4100e-003**	**1.0000e-005**	**0.0000**	**4.7000e-003**

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	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1883					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Total	**0.2145**	**2.0000e-005**	**2.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.4100e-003**	**4.4100e-003**	**1.0000e-005**	**0.0000**	**4.7000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.7375	4.5900e-003	2.7500e-003	4.6717

Unmitigated	3.7375	4.5900e-003	2.7500e-003	4.6717

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.48141 / 2.13377	3.7375	4.5900e-003	2.7500e-003	4.6717
Total		**3.7375**	**4.5900e-003**	**2.7500e-003**	**4.6717**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.48141 / 2.13377	3.7375	4.5900e-003	2.7500e-003	4.6717
Total		**3.7375**	**4.5900e-003**	**2.7500e-003**	**4.6717**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.0176	0.5920	0.0000	24.8182
Unmitigated	10.0176	0.5920	0.0000	24.8182

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	49.35	10.0176	0.5920	0.0000	24.8182
Total		**10.0176**	**0.5920**	**0.0000**	**24.8182**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	49.35	10.0176	0.5920	0.0000	24.8182
Total		**10.0176**	**0.5920**	**0.0000**	**24.8182**

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

Berryessa Plaza, San Jose

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	200.00	Space	0.00	73,226.00	0
Strip Mall	47.00	1000sqft	2.76	47,000.00	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)	210	**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 CO2 rate = 210

Land Use - Provided site plan land uses, based on 2.76 acre site. Retail land use consistent with trip gen rate provided by client.

Construction Phase - default construction schedule, trenching added

Off-road Equipment -

Off-road Equipment - per default construction data sheet, electrified crane and site power

Off-road Equipment - Default construction equip & hours

Off-road Equipment - Per Default Construction data sheet

Off-road Equipment - Per Default Construction Data Sheet

Off-road Equipment - Per Default Construction Data Sheet

Off-road Equipment - trenching added

Off-road Equipment - Per Default Construction Data Sheet

Trips and VMT - Concrete and asphalt haul trips estimated using plans provided and depth assumptions. Trip lengths for these asumed to be vendor length

Demolition - Site is bare ground

Grading - Assumed balanced site, no soil import/export. Site is 2.76 acres

Architectural Coating - Estimate from plans, 73,226

Vehicle Trips - Week Daily trips for development estimated to be 1,489 based on ITE 820 (Shopping Center) and reductions from location and passby.

Vehicle Emission Factors - EMFAC2017 EFs for 2022 Santa Clara Co.

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Water And Wastewater - Assume 100% WWTP

Construction Off-road Equipment Mitigation - T4 Final with mitigation with Enhanced BMPs for dust

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	4,394.00	73,226.00
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblFleetMix	MDV	0.11	0.11

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tblFleetMix	MH	7.4000e-004	7.6598e-004
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tblFleetMix	MHD	0.01	0.01
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tblFleetMix	OBUS	2.1440e-003	1.6604e-003
tblFleetMix	SBUS	6.2700e-004	9.2542e-004
tblFleetMix	SBUS	6.2700e-004	9.2542e-004
tblFleetMix	UBUS	1.5480e-003	1.2746e-003
tblFleetMix	UBUS	1.5480e-003	1.2746e-003
tblGrading	AcresOfGrading	3.00	2.76
tblGrading	AcresOfGrading	4.50	2.76
tblLandUse	LandUseSquareFeet	80,000.00	73,226.00
tblLandUse	LotAcreage	1.80	0.00
tblLandUse	LotAcreage	1.08	2.76
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	210
tblTripsAndVMT	VendorTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
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tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.43
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tblVehicleEF	LHD1	0.02	0.02
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tblVehicleEF	LHD1	0.12	0.10
tblVehicleEF	LHD1	0.33	0.55
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.0000e-005	8.8000e-005
tblVehicleEF	LHD1	6.8380e-003	7.9010e-003
tblVehicleEF	LHD1	3.8300e-004	1.2000e-004
tblVehicleEF	LHD1	2.7290e-003	2.1470e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.3770e-003	1.0820e-003
tblVehicleEF	LHD1	0.15	0.12
tblVehicleEF	LHD1	0.33	0.55

tblVehicleEF	LHD1	0.31	0.09
tblVehicleEF	LHD2	3.5690e-003	3.2840e-003
tblVehicleEF	LHD2	8.3070e-003	7.5540e-003
tblVehicleEF	LHD2	7.6510e-003	9.2300e-003
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.59	0.66
tblVehicleEF	LHD2	1.25	0.67
tblVehicleEF	LHD2	14.03	14.10
tblVehicleEF	LHD2	712.64	782.55
tblVehicleEF	LHD2	24.58	8.09
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.81	1.00
tblVehicleEF	LHD2	0.48	0.19
tblVehicleEF	LHD2	1.2710e-003	1.4080e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	4.4000e-004	1.4100e-004
tblVehicleEF	LHD2	1.2160e-003	1.3470e-003
tblVehicleEF	LHD2	2.6860e-003	2.6820e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	4.0400e-004	1.3000e-004
tblVehicleEF	LHD2	8.9800e-004	1.1650e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	4.7100e-004	5.8300e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.08	0.31
tblVehicleEF	LHD2	0.10	0.05
tblVehicleEF	LHD2	1.3700e-004	1.3500e-004
tblVehicleEF	LHD2	6.9320e-003	7.5590e-003

tblVehicleEF	LHD2	2.6800e-004	8.0000e-005
tblVehicleEF	LHD2	8.9800e-004	1.1650e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.7100e-004	5.8300e-004
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.08	0.31
tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	MCY	0.44	0.33
tblVehicleEF	MCY	0.16	0.26
tblVehicleEF	MCY	19.05	19.19
tblVehicleEF	MCY	10.16	9.00
tblVehicleEF	MCY	169.25	210.27
tblVehicleEF	MCY	45.57	61.40
tblVehicleEF	MCY	1.15	1.15
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	1.9790e-003	1.9370e-003
tblVehicleEF	MCY	3.9070e-003	3.1610e-003
tblVehicleEF	MCY	1.8510e-003	1.8120e-003
tblVehicleEF	MCY	3.6840e-003	2.9780e-003
tblVehicleEF	MCY	0.91	1.82
tblVehicleEF	MCY	0.71	0.70
tblVehicleEF	MCY	0.50	1.00
tblVehicleEF	MCY	2.22	2.23
tblVehicleEF	MCY	0.62	2.06
tblVehicleEF	MCY	2.21	1.95
tblVehicleEF	MCY	2.0690e-003	2.0810e-003
tblVehicleEF	MCY	6.8700e-004	6.0800e-004
tblVehicleEF	MCY	0.91	1.82
tblVehicleEF	MCY	0.71	0.70

tblVehicleEF	MCY	0.50	1.00
tblVehicleEF	MCY	2.75	2.75
tblVehicleEF	MCY	0.62	2.06
tblVehicleEF	MCY	2.41	2.13
tblVehicleEF	MDV	0.01	4.4780e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.16	0.95
tblVehicleEF	MDV	2.96	3.30
tblVehicleEF	MDV	459.29	395.09
tblVehicleEF	MDV	104.69	84.62
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.26	0.36
tblVehicleEF	MDV	1.8300e-003	1.5890e-003
tblVehicleEF	MDV	2.5220e-003	2.0110e-003
tblVehicleEF	MDV	1.6870e-003	1.4660e-003
tblVehicleEF	MDV	2.3200e-003	1.8500e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.17	0.14
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.23	0.42
tblVehicleEF	MDV	4.6000e-003	3.8800e-003
tblVehicleEF	MDV	1.0990e-003	8.3200e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.17	0.14
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.25	0.46

tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	2.40	1.34
tblVehicleEF	MH	6.10	2.25
tblVehicleEF	MH	1,217.52	1,557.00
tblVehicleEF	MH	59.35	19.21
tblVehicleEF	MH	1.39	1.43
tblVehicleEF	MH	0.86	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.2090e-003	2.9100e-004
tblVehicleEF	MH	3.2170e-003	3.2700e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.1120e-003	2.6800e-004
tblVehicleEF	MH	0.89	0.79
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.31	0.27
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.02	1.59
tblVehicleEF	MH	0.35	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	7.0000e-004	1.9000e-004
tblVehicleEF	MH	0.89	0.79
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.31	0.27
tblVehicleEF	MH	0.15	0.10
tblVehicleEF	MH	0.02	1.59
tblVehicleEF	MH	0.38	0.11
tblVehicleEF	MHD	0.02	3.4370e-003
tblVehicleEF	MHD	5.7650e-003	5.6390e-003

tblVehicleEF	MHD	0.05	9.4480e-003
tblVehicleEF	MHD	0.40	0.37
tblVehicleEF	MHD	0.42	0.48
tblVehicleEF	MHD	6.48	1.16
tblVehicleEF	MHD	137.16	75.81
tblVehicleEF	MHD	1,201.31	1,131.31
tblVehicleEF	MHD	61.41	9.18
tblVehicleEF	MHD	0.54	0.56
tblVehicleEF	MHD	1.54	2.06
tblVehicleEF	MHD	10.30	1.38
tblVehicleEF	MHD	7.6500e-004	1.2350e-003
tblVehicleEF	MHD	6.5420e-003	0.04
tblVehicleEF	MHD	9.3800e-004	1.2000e-004
tblVehicleEF	MHD	7.3200e-004	1.1810e-003
tblVehicleEF	MHD	6.2530e-003	0.04
tblVehicleEF	MHD	8.6200e-004	1.1000e-004
tblVehicleEF	MHD	9.7300e-004	4.4800e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	4.9200e-004	2.2200e-004
tblVehicleEF	MHD	0.06	0.09
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.38	0.05
tblVehicleEF	MHD	1.3210e-003	7.1900e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.2700e-004	9.1000e-005
tblVehicleEF	MHD	9.7300e-004	4.4800e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	4.9200e-004	2.2200e-004

tblVehicleEF	MHD	0.07	0.11
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.42	0.06
tblVehicleEF	OBUS	0.01	7.1700e-003
tblVehicleEF	OBUS	8.1680e-003	5.7850e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.56
tblVehicleEF	OBUS	0.52	0.59
tblVehicleEF	OBUS	5.20	1.92
tblVehicleEF	OBUS	110.09	95.82
tblVehicleEF	OBUS	1,307.90	1,365.97
tblVehicleEF	OBUS	66.90	15.56
tblVehicleEF	OBUS	0.51	0.47
tblVehicleEF	OBUS	1.73	1.73
tblVehicleEF	OBUS	2.82	1.02
tblVehicleEF	OBUS	1.1200e-004	7.1500e-004
tblVehicleEF	OBUS	7.6290e-003	0.02
tblVehicleEF	OBUS	7.7800e-004	1.3700e-004
tblVehicleEF	OBUS	1.0700e-004	6.8400e-004
tblVehicleEF	OBUS	7.2800e-003	0.01
tblVehicleEF	OBUS	7.1600e-004	1.2600e-004
tblVehicleEF	OBUS	1.1690e-003	1.0630e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	5.1000e-004	4.6800e-004
tblVehicleEF	OBUS	0.07	0.06
tblVehicleEF	OBUS	0.03	0.17
tblVehicleEF	OBUS	0.32	0.09
tblVehicleEF	OBUS	1.0620e-003	9.1000e-004
tblVehicleEF	OBUS	0.01	0.01

tblVehicleEF	OBUS	7.6000e-004	1.5400e-004
tblVehicleEF	OBUS	1.1690e-003	1.0630e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	5.1000e-004	4.6800e-004
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	0.03	0.17
tblVehicleEF	OBUS	0.36	0.10
tblVehicleEF	SBUS	0.84	0.05
tblVehicleEF	SBUS	0.02	6.5710e-003
tblVehicleEF	SBUS	0.08	4.5790e-003
tblVehicleEF	SBUS	8.09	2.08
tblVehicleEF	SBUS	1.13	0.54
tblVehicleEF	SBUS	10.09	0.68
tblVehicleEF	SBUS	1,121.96	347.47
tblVehicleEF	SBUS	1,059.05	1,071.12
tblVehicleEF	SBUS	55.12	3.82
tblVehicleEF	SBUS	9.12	3.61
tblVehicleEF	SBUS	4.06	5.09
tblVehicleEF	SBUS	12.31	0.77
tblVehicleEF	SBUS	9.2300e-003	4.2010e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.8200e-004	4.3000e-005
tblVehicleEF	SBUS	8.8300e-003	4.0190e-003
tblVehicleEF	SBUS	2.6340e-003	2.7350e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.1100e-004	3.9000e-005
tblVehicleEF	SBUS	3.5670e-003	4.9600e-004
tblVehicleEF	SBUS	0.04	4.8020e-003

tblVehicleEF	SBUS	0.96	0.23
tblVehicleEF	SBUS	1.4850e-003	2.0400e-004
tblVehicleEF	SBUS	0.12	0.09
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.50	0.03
tblVehicleEF	SBUS	0.01	3.3050e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	7.2500e-004	3.8000e-005
tblVehicleEF	SBUS	3.5670e-003	4.9600e-004
tblVehicleEF	SBUS	0.04	4.8020e-003
tblVehicleEF	SBUS	1.39	0.33
tblVehicleEF	SBUS	1.4850e-003	2.0400e-004
tblVehicleEF	SBUS	0.15	0.11
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.55	0.03
tblVehicleEF	UBUS	0.27	1.38
tblVehicleEF	UBUS	0.04	2.8070e-003
tblVehicleEF	UBUS	5.18	10.37
tblVehicleEF	UBUS	8.16	0.14
tblVehicleEF	UBUS	2,092.55	1,606.76
tblVehicleEF	UBUS	99.16	1.64
tblVehicleEF	UBUS	10.44	0.73
tblVehicleEF	UBUS	14.91	0.02
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.23	5.2780e-003
tblVehicleEF	UBUS	1.1060e-003	2.0000e-006
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	8.3320e-003
tblVehicleEF	UBUS	0.22	5.0490e-003

tblVehicleEF	UBUS	1.0170e-003	2.0000e-006
tblVehicleEF	UBUS	2.3350e-003	1.9400e-004
tblVehicleEF	UBUS	0.04	2.9870e-003
tblVehicleEF	UBUS	1.1130e-003	1.2200e-004
tblVehicleEF	UBUS	0.66	0.02
tblVehicleEF	UBUS	8.3620e-003	0.02
tblVehicleEF	UBUS	0.57	0.01
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.1370e-003	1.6000e-005
tblVehicleEF	UBUS	2.3350e-003	1.9400e-004
tblVehicleEF	UBUS	0.04	2.9870e-003
tblVehicleEF	UBUS	1.1130e-003	1.2200e-004
tblVehicleEF	UBUS	0.99	1.41
tblVehicleEF	UBUS	8.3620e-003	0.02
tblVehicleEF	UBUS	0.63	0.01
tblVehicleTrips	ST_TR	42.04	30.05
tblVehicleTrips	SU_TR	20.43	14.60
tblVehicleTrips	WD_TR	44.32	31.68
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	SepticTankPercent	10.33	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					
2021	0.6700	1.1865	1.1945	1.7700e-003	0.0210	0.0651	0.0861	0.0103	0.0620	0.0723	0.0000	143.7311	143.7311	0.0327	0.0000	144.5493
2022	4.2400e-003	0.0420	0.0526	8.0000e-005	0.0000	2.2000e-003	2.2000e-003	0.0000	2.0200e-003	2.0200e-003	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348
Maximum	**0.6700**	**1.1865**	**1.1945**	**1.7700e-003**	**0.0210**	**0.0651**	**0.0861**	**0.0103**	**0.0620**	**0.0723**	**0.0000**	**143.7311**	**143.7311**	**0.0327**	**0.0000**	**144.5493**

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					
2021	0.5253	0.3800	1.1368	1.7700e-003	4.0900e-003	2.4600e-003	6.5600e-003	2.0000e-003	2.4600e-003	4.4600e-003	0.0000	143.7309	143.7309	0.0327	0.0000	144.5491
2022	9.5000e-004	4.1000e-003	0.0584	8.0000e-005	0.0000	1.3000e-004	1.3000e-004	0.0000	1.3000e-004	1.3000e-004	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348
Maximum	**0.5253**	**0.3800**	**1.1368**	**1.7700e-003**	**4.0900e-003**	**2.4600e-003**	**6.5600e-003**	**2.0000e-003**	**2.4600e-003**	**4.4600e-003**	**0.0000**	**143.7309**	**143.7309**	**0.0327**	**0.0000**	**144.5491**

	ROG	NOx	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	**21.94**	**68.73**	**4.17**	**0.00**	**80.51**	**96.15**	**92.42**	**80.49**	**95.96**	**93.82**	**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	**1-4-2021**	**4-3-2021**	0.4765	0.0849
2	**4-4-2021**	**7-3-2021**	0.3018	0.1128
3	**7-4-2021**	**10-3-2021**	0.3051	0.1141
4	**10-4-2021**	**1-3-2022**	0.7690	0.5938
5	**1-4-2022**	**4-3-2022**	0.0367	0.0040
		Highest	0.7690	0.5938

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	0.2145	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Energy	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	56.2442	56.2442	7.0600e-003	1.5500e-003	56.8814
Mobile	0.5099	0.6842	3.2932	7.7400e-003	0.7802	8.0300e-003	0.7882	0.2087	7.5300e-003	0.2163	0.0000	757.8581	757.8581	0.0452	0.0000	758.9876
Waste						0.0000	0.0000		0.0000	0.0000	10.0176	0.0000	10.0176	0.5920	0.0000	24.8182
Water						0.0000	0.0000		0.0000	0.0000	1.2317	2.5058	3.7375	4.5900e-003	2.7500e-003	4.6717
Total	**0.7250**	**0.6897**	**3.3001**	**7.7700e-003**	**0.7802**	**8.4500e-003**	**0.7887**	**0.2087**	**7.9500e-003**	**0.2167**	**11.2493**	**816.6124**	**827.8617**	**0.6489**	**4.3000e-003**	**845.3636**

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	0.2145	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Energy	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	56.2442	56.2442	7.0600e-003	1.5500e-003	56.8814
Mobile	0.5099	0.6842	3.2932	7.7400e-003	0.7802	8.0300e-003	0.7882	0.2087	7.5300e-003	0.2163	0.0000	757.8581	757.8581	0.0452	0.0000	758.9876
Waste						0.0000	0.0000		0.0000	0.0000	10.0176	0.0000	10.0176	0.5920	0.0000	24.8182
Water						0.0000	0.0000		0.0000	0.0000	1.2317	2.5058	3.7375	4.5900e-003	2.7500e-003	4.6717

Total	0.7250	0.6897	3.3001	7.7700e-003	0.7802	8.4500e-003	0.7887	0.2087	7.9500e-003	0.2167	11.2493	816.6124	827.8617	0.6489	4.3000e-003	845.3636

	ROG	NOx	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	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/3/2021	5	3	
3	Grading	Grading	2/4/2021	2/11/2021	5	6	
4	Trenching/Foundation	Trenching	2/4/2021	2/11/2021	5	6	
5	Building Construction	Building Construction	2/12/2021	12/16/2021	5	220	
6	Architectural Coating	Architectural Coating	12/17/2021	12/30/2021	5	10	
7	Paving	Paving	12/31/2021	1/13/2022	5	10	

Acres of Grading (Site Preparation Phase): 2.76

Acres of Grading (Grading Phase): 2.76

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 70,500; Non-Residential Outdoor: 23,500; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48

Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	0	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching/Foundation	Excavators	1	8.00	158	0.38
Trenching/Foundation	Tractors/Loaders/Backhoes	1	8.00	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	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8100e-003	0.0122	0.1472	2.4000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**2.8100e-003**	**0.0122**	**0.1472**	**2.4000e-004**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

Mitigated Construction Off-Site

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

3.3 Site Preparation - 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					
Fugitive Dust					1.4600e-003	0.0000	1.4600e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3200e-003	0.0274	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.3200e-003**	**0.0274**	**0.0161**	**4.0000e-005**	**1.4600e-003**	**1.0500e-003**	**2.5100e-003**	**1.6000e-004**	**9.7000e-004**	**1.1300e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	4.5000e-004	1.9600e-003	0.0178	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**4.5000e-004**	**1.9600e-003**	**0.0178**	**4.0000e-005**	**2.9000e-004**	**6.0000e-005**	**3.5000e-004**	**3.0000e-005**	**6.0000e-005**	**9.0000e-005**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

Mitigated Construction Off-Site

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

3.4 Grading - 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					
Fugitive Dust					0.0195	0.0000	0.0195	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9900e-003	0.0557	0.0234	5.0000e-005		2.4500e-003	2.4500e-003		2.2600e-003	2.2600e-003	0.0000	4.7146	4.7146	1.5200e-003	0.0000	4.7527
Total	**4.9900e-003**	**0.0557**	**0.0234**	**5.0000e-005**	**0.0195**	**2.4500e-003**	**0.0220**	**0.0101**	**2.2600e-003**	**0.0124**	**0.0000**	**4.7146**	**4.7146**	**1.5200e-003**	**0.0000**	**4.7527**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.8100e-003	0.0000	3.8100e-003	1.9700e-003	0.0000	1.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6000e-004	2.8500e-003	0.0266	5.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	4.7146	4.7146	1.5200e-003	0.0000	4.7527
Total	**6.6000e-004**	**2.8500e-003**	**0.0266**	**5.0000e-005**	**3.8100e-003**	**9.0000e-005**	**3.9000e-003**	**1.9700e-003**	**9.0000e-005**	**2.0600e-003**	**0.0000**	**4.7146**	**4.7146**	**1.5200e-003**	**0.0000**	**4.7527**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Trenching/Foundation - 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	1.2500e-003	0.0122	0.0166	2.0000e-005		6.5000e-004	6.5000e-004		6.0000e-004	6.0000e-004	0.0000	2.1802	2.1802	7.1000e-004	0.0000	2.1978
Total	**1.2500e-003**	**0.0122**	**0.0166**	**2.0000e-005**		**6.5000e-004**	**6.5000e-004**		**6.0000e-004**	**6.0000e-004**	**0.0000**	**2.1802**	**2.1802**	**7.1000e-004**	**0.0000**	**2.1978**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0000e-004	1.3200e-003	0.0188	2.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.1802	2.1802	7.1000e-004	0.0000	2.1978
Total	**3.0000e-004**	**1.3200e-003**	**0.0188**	**2.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.1802**	**2.1802**	**7.1000e-004**	**0.0000**	**2.1978**

Mitigated Construction Off-Site

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

3.6 Building Construction - 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	0.1402	0.8813	0.9785	1.3900e-003		0.0498	0.0498		0.0478	0.0478	0.0000	110.4841	110.4841	0.0237	0.0000	111.0774
Total	**0.1402**	**0.8813**	**0.9785**	**1.3900e-003**		**0.0498**	**0.0498**		**0.0478**	**0.0478**	**0.0000**	**110.4841**	**110.4841**	**0.0237**	**0.0000**	**111.0774**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0212	0.3606	0.9108	1.3900e-003		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	110.4839	110.4839	0.0237	0.0000	111.0772

Total	**0.0212**	**0.3606**	**0.9108**	**1.3900e-003**		**1.8700e-003**	**1.8700e-003**		**1.8700e-003**	**1.8700e-003**	**0.0000**	**110.4839**	**110.4839**	**0.0237**	**0.0000**	**111.0772**

Mitigated Construction Off-Site

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

3.7 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	0.4996					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.5007**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4996					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	6.4000e-004	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.4998**	**6.4000e-004**	**9.1600e-003**	**1.0000e-005**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 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	5.3000e-004	5.3200e-003	5.8900e-003	1.0000e-005		2.9000e-004	2.9000e-004		2.7000e-004	2.7000e-004	0.0000	0.7752	0.7752	2.5000e-004	0.0000	0.7814
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3000e-004**	**5.3200e-003**	**5.8900e-003**	**1.0000e-005**		**2.9000e-004**	**2.9000e-004**		**2.7000e-004**	**2.7000e-004**	**0.0000**	**0.7752**	**0.7752**	**2.5000e-004**	**0.0000**	**0.7814**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1000e-004	4.6000e-004	6.4900e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.7752	0.7752	2.5000e-004	0.0000	0.7814
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1000e-004**	**4.6000e-004**	**6.4900e-003**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.7752**	**0.7752**	**2.5000e-004**	**0.0000**	**0.7814**

Mitigated Construction Off-Site

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

3.8 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2400e-003	0.0420	0.0526	8.0000e-005		2.2000e-003	2.2000e-003		2.0200e-003	2.0200e-003	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2400e-003**	**0.0420**	**0.0526**	**8.0000e-005**		**2.2000e-003**	**2.2000e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**6.9795**	**6.9795**	**2.2100e-003**	**0.0000**	**7.0348**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.5000e-004	4.1000e-003	0.0584	8.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.5000e-004**	**4.1000e-003**	**0.0584**	**8.0000e-005**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**6.9795**	**6.9795**	**2.2100e-003**	**0.0000**	**7.0348**

Mitigated Construction Off-Site

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

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	0.5099	0.6842	3.2932	7.7400e-003	0.7802	8.0300e-003	0.7882	0.2087	7.5300e-003	0.2163	0.0000	757.8581	757.8581	0.0452	0.0000	758.9876
Unmitigated	0.5099	0.6842	3.2932	7.7400e-003	0.7802	8.0300e-003	0.7882	0.2087	7.5300e-003	0.2163	0.0000	757.8581	757.8581	0.0452	0.0000	758.9876

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Strip Mall	1,489.00	1,412.40	686.38	2,099,676	2,099,676
Total	1,489.00	1,412.40	686.38	2,099,676	2,099,676

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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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
Parking Lot	0.589038	0.052546	0.179703	0.107443	0.021069	0.005192	0.013353	0.021839	0.001660	0.001275	0.005191	0.000925	0.000766
Strip Mall	0.589038	0.052546	0.179703	0.107443	0.021069	0.005192	0.013353	0.021839	0.001660	0.001275	0.005191	0.000925	0.000766

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	50.3000	50.3000	6.9500e-003	1.4400e-003	50.9019
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	50.3000	50.3000	6.9500e-003	1.4400e-003	50.9019
NaturalGas Mitigated	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795
NaturalGas Unmitigated	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795

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					
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
Strip Mall	111390	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795
Total		**6.0000e-004**	**5.4600e-003**	**4.5900e-003**	**3.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**5.9442**	**5.9442**	**1.1000e-004**	**1.1000e-004**	**5.9795**

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					
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
Strip Mall	111390	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795
Total		**6.0000e-004**	**5.4600e-003**	**4.5900e-003**	**3.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**5.9442**	**5.9442**	**1.1000e-004**	**1.1000e-004**	**5.9795**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	25629.1	2.4413	3.4000e-004	7.0000e-005	2.4705
Strip Mall	502430	47.8587	6.6100e-003	1.3700e-003	48.4314
Total		**50.3000**	**6.9500e-003**	**1.4400e-003**	**50.9019**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	25629.1	2.4413	3.4000e-004	7.0000e-005	2.4705
Strip Mall	502430	47.8587	6.6100e-003	1.3700e-003	48.4314
Total		**50.3000**	**6.9500e-003**	**1.4400e-003**	**50.9019**

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	0.2145	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Unmitigated	0.2145	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003

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	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1883					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Total	**0.2145**	**2.0000e-005**	**2.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.4100e-003**	**4.4100e-003**	**1.0000e-005**	**0.0000**	**4.7000e-003**

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	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1883					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	2.1000e-004	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Total	**0.2145**	**2.0000e-005**	**2.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.4100e-003**	**4.4100e-003**	**1.0000e-005**	**0.0000**	**4.7000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.7375	4.5900e-003	2.7500e-003	4.6717
Unmitigated	3.7375	4.5900e-003	2.7500e-003	4.6717

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.48141 / 2.13377	3.7375	4.5900e-003	2.7500e-003	4.6717
Total		**3.7375**	**4.5900e-003**	**2.7500e-003**	**4.6717**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.48141 / 2.13377	3.7375	4.5900e-003	2.7500e-003	4.6717
Total		**3.7375**	**4.5900e-003**	**2.7500e-003**	**4.6717**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.0176	0.5920	0.0000	24.8182
Unmitigated	10.0176	0.5920	0.0000	24.8182

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	49.35	10.0176	0.5920	0.0000	24.8182
Total		**10.0176**	**0.5920**	**0.0000**	**24.8182**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	49.35	10.0176	0.5920	0.0000	24.8182
Total		**10.0176**	**0.5920**	**0.0000**	**24.8182**

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

Berryessa Plaza, San Jose - Santa Clara County, Annual

Berryessa Plaza, San Jose

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	200.00	Space	0.00	73,226.00	0
Strip Mall	47.00	1000sqft	1.08	47,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	210	**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 CO2 rate = 210

Land Use - Provided site plan land uses, based on 2.76 acre site. Retail land use consistent with trip gen rate provided by client.

Construction Phase - default construction schedule, trenching added

Off-road Equipment -

Off-road Equipment - per default construction data sheet

Off-road Equipment - Default construction equip & hours

Off-road Equipment - Per Default Construction data sheet

Off-road Equipment -

Off-road Equipment - Per Default Construction Data Sheet

Off-road Equipment - trenching added

Off-road Equipment - Per Default Construction Data Sheet

Trips and VMT - Concrete and asphalt haul trips estimated using plans provided and depth assumptions. Trip lengths for these asumed to be vendor length

Demolition - Site is bare ground

Grading - Assumed balanced site, no soil import/export. Site is 2.76 acres

Architectural Coating - Estimate from plans

Vehicle Trips - Week Daily trips for development estimated to be 1,489 based on ITE 820 (Shopping Center) and reductions from location and passby.

Vehicle Emission Factors - EMFAC2017 EFs for 2030 Santa Clara Co.

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Water And Wastewater - Assume 100% WWTP

Construction Off-road Equipment Mitigation - T3L3 mitigation with Basic BMPs for dust

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	4,394.00	73,226.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstructionPhase	NumDays	4.00	6.00
tblConstructionPhase	NumDays	2.00	3.00
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tblFleetMix	HHD	0.02	0.02
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tblFleetMix	LDA	0.62	0.60
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tblFleetMix	LDT1	0.03	0.05
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
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tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	LHD2	5.0600e-003	5.5563e-003
tblFleetMix	MCY	5.1220e-003	4.7803e-003
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tblFleetMix	MDV	0.10	0.11
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tblFleetMix	MH	6.5100e-004	7.2763e-004
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tblFleetMix	MHD	0.01	0.01
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tblFleetMix	OBUS	2.2210e-003	1.4429e-003
tblFleetMix	SBUS	6.4600e-004	9.0041e-004
tblFleetMix	SBUS	6.4600e-004	9.0041e-004
tblFleetMix	UBUS	1.4700e-003	1.1782e-003

tblFleetMix	UBUS	1.4700e-003	1.1782e-003
tblGrading	AcresOfGrading	3.00	2.76
tblGrading	AcresOfGrading	4.50	2.76
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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tblTripsAndVMT	HaulingTripLength	20.00	7.30
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tblVehicleEF	LHD1	0.08	0.05
tblVehicleEF	LHD1	0.02	0.02
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tblVehicleEF	LHD2	3.4400e-004	9.8000e-005
tblVehicleEF	LHD2	5.1500e-004	6.4200e-004
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.0800e-004	3.7400e-004
tblVehicleEF	LHD2	0.09	0.10
tblVehicleEF	LHD2	0.04	0.14
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	1.3300e-004	1.2400e-004
tblVehicleEF	LHD2	6.5670e-003	6.5570e-003
tblVehicleEF	LHD2	2.3300e-004	6.4000e-005

tblVehicleEF	LHD2	5.1500e-004	6.4200e-004
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.0800e-004	3.7400e-004
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	0.04	0.14
tblVehicleEF	LHD2	0.05	0.02
tblVehicleEF	MCY	0.46	0.32
tblVehicleEF	MCY	0.16	0.25
tblVehicleEF	MCY	17.52	17.61
tblVehicleEF	MCY	10.34	9.20
tblVehicleEF	MCY	171.38	209.76
tblVehicleEF	MCY	42.85	59.23
tblVehicleEF	MCY	1.14	1.14
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	2.1570e-003	2.1380e-003
tblVehicleEF	MCY	3.3210e-003	2.8620e-003
tblVehicleEF	MCY	2.0120e-003	1.9940e-003
tblVehicleEF	MCY	3.1070e-003	2.6760e-003
tblVehicleEF	MCY	0.88	1.79
tblVehicleEF	MCY	0.61	0.63
tblVehicleEF	MCY	0.46	0.95
tblVehicleEF	MCY	2.12	2.13
tblVehicleEF	MCY	0.46	1.49
tblVehicleEF	MCY	2.11	1.88
tblVehicleEF	MCY	2.0640e-003	2.0760e-003
tblVehicleEF	MCY	6.5900e-004	5.8600e-004
tblVehicleEF	MCY	0.88	1.79
tblVehicleEF	MCY	0.61	0.63
tblVehicleEF	MCY	0.46	0.95

tblVehicleEF	MCY	2.66	2.67
tblVehicleEF	MCY	0.46	1.49
tblVehicleEF	MCY	2.30	2.04
tblVehicleEF	MDV	5.1180e-003	1.7720e-003
tblVehicleEF	MDV	7.2260e-003	0.04
tblVehicleEF	MDV	0.68	0.55
tblVehicleEF	MDV	1.51	2.32
tblVehicleEF	MDV	358.67	322.27
tblVehicleEF	MDV	82.28	67.92
tblVehicleEF	MDV	0.07	0.04
tblVehicleEF	MDV	0.11	0.18
tblVehicleEF	MDV	1.3880e-003	1.0340e-003
tblVehicleEF	MDV	2.0820e-003	1.3440e-003
tblVehicleEF	MDV	1.2780e-003	9.5400e-004
tblVehicleEF	MDV	1.9150e-003	1.2360e-003
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.13	0.10
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.01	6.8870e-003
tblVehicleEF	MDV	0.09	0.34
tblVehicleEF	MDV	0.10	0.20
tblVehicleEF	MDV	3.5870e-003	2.9760e-003
tblVehicleEF	MDV	8.4800e-004	6.2800e-004
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.13	0.10
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.02	9.9830e-003
tblVehicleEF	MDV	0.09	0.34
tblVehicleEF	MDV	0.11	0.22
tblVehicleEF	MH	8.2310e-003	5.0270e-003

tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.45	0.31
tblVehicleEF	MH	3.72	1.64
tblVehicleEF	MH	1,184.19	1,350.27
tblVehicleEF	MH	56.79	15.54
tblVehicleEF	MH	0.84	1.06
tblVehicleEF	MH	0.62	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	8.8300e-004	2.1200e-004
tblVehicleEF	MH	3.2210e-003	3.2970e-003
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	8.1200e-004	1.9500e-004
tblVehicleEF	MH	0.46	0.35
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	0.18	0.14
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	0.01	0.54
tblVehicleEF	MH	0.22	0.07
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.3200e-004	1.5400e-004
tblVehicleEF	MH	0.46	0.35
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	0.18	0.14
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.01	0.54
tblVehicleEF	MH	0.24	0.08
tblVehicleEF	MHD	0.02	3.8320e-003
tblVehicleEF	MHD	2.7470e-003	1.0340e-003
tblVehicleEF	MHD	0.03	8.3830e-003

tblVehicleEF	MHD	0.37	0.41
tblVehicleEF	MHD	0.25	0.15
tblVehicleEF	MHD	3.74	0.87
tblVehicleEF	MHD	131.96	65.10
tblVehicleEF	MHD	1,167.79	993.45
tblVehicleEF	MHD	59.45	8.55
tblVehicleEF	MHD	0.34	0.34
tblVehicleEF	MHD	1.04	1.43
tblVehicleEF	MHD	9.99	1.69
tblVehicleEF	MHD	5.2000e-005	1.6200e-004
tblVehicleEF	MHD	3.0080e-003	7.0060e-003
tblVehicleEF	MHD	8.2100e-004	1.1200e-004
tblVehicleEF	MHD	5.0000e-005	1.5500e-004
tblVehicleEF	MHD	2.8710e-003	6.6960e-003
tblVehicleEF	MHD	7.5400e-004	1.0300e-004
tblVehicleEF	MHD	6.4300e-004	2.8900e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.8200e-004	1.6800e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.23	0.04
tblVehicleEF	MHD	1.2710e-003	6.1800e-004
tblVehicleEF	MHD	0.01	9.4800e-003
tblVehicleEF	MHD	6.6000e-004	8.5000e-005
tblVehicleEF	MHD	6.4300e-004	2.8900e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	3.8200e-004	1.6800e-004
tblVehicleEF	MHD	0.05	0.01

tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.25	0.05
tblVehicleEF	OBUS	0.01	7.0980e-003
tblVehicleEF	OBUS	4.0840e-003	2.1970e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.24	0.64
tblVehicleEF	OBUS	0.30	0.26
tblVehicleEF	OBUS	4.08	1.58
tblVehicleEF	OBUS	110.55	97.36
tblVehicleEF	OBUS	1,272.30	1,210.85
tblVehicleEF	OBUS	64.94	13.46
tblVehicleEF	OBUS	0.24	0.43
tblVehicleEF	OBUS	0.85	1.45
tblVehicleEF	OBUS	2.74	1.13
tblVehicleEF	OBUS	2.2000e-005	1.4200e-004
tblVehicleEF	OBUS	2.8340e-003	7.8820e-003
tblVehicleEF	OBUS	9.3800e-004	1.5600e-004
tblVehicleEF	OBUS	2.1000e-005	1.3600e-004
tblVehicleEF	OBUS	2.6900e-003	7.5260e-003
tblVehicleEF	OBUS	8.6200e-004	1.4400e-004
tblVehicleEF	OBUS	1.1660e-003	1.0620e-003
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.3200e-004	4.8700e-004
tblVehicleEF	OBUS	0.04	0.02
tblVehicleEF	OBUS	0.03	0.18
tblVehicleEF	OBUS	0.26	0.08
tblVehicleEF	OBUS	1.0660e-003	9.2400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.2100e-004	1.3300e-004

tblVehicleEF	OBUS	1.1660e-003	1.0620e-003
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	5.3200e-004	4.8700e-004
tblVehicleEF	OBUS	0.05	0.02
tblVehicleEF	OBUS	0.03	0.18
tblVehicleEF	OBUS	0.28	0.08
tblVehicleEF	SBUS	0.81	0.07
tblVehicleEF	SBUS	7.6490e-003	4.4040e-003
tblVehicleEF	SBUS	0.06	6.3380e-003
tblVehicleEF	SBUS	8.87	2.93
tblVehicleEF	SBUS	0.48	0.37
tblVehicleEF	SBUS	7.57	0.86
tblVehicleEF	SBUS	1,023.58	337.48
tblVehicleEF	SBUS	1,008.60	970.50
tblVehicleEF	SBUS	61.81	5.06
tblVehicleEF	SBUS	4.35	2.71
tblVehicleEF	SBUS	1.72	3.09
tblVehicleEF	SBUS	10.76	1.18
tblVehicleEF	SBUS	2.1870e-003	2.0480e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	8.4940e-003	0.02
tblVehicleEF	SBUS	1.1020e-003	6.8000e-005
tblVehicleEF	SBUS	2.0920e-003	1.9600e-003
tblVehicleEF	SBUS	2.5880e-003	2.6690e-003
tblVehicleEF	SBUS	8.1060e-003	0.02
tblVehicleEF	SBUS	1.0130e-003	6.2000e-005
tblVehicleEF	SBUS	3.7080e-003	8.7000e-004
tblVehicleEF	SBUS	0.03	8.3040e-003
tblVehicleEF	SBUS	1.05	0.32

tblVehicleEF	SBUS	1.7580e-003	4.1400e-004
tblVehicleEF	SBUS	0.07	0.06
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.01	3.2190e-003
tblVehicleEF	SBUS	9.7440e-003	9.2880e-003
tblVehicleEF	SBUS	7.4900e-004	5.0000e-005
tblVehicleEF	SBUS	3.7080e-003	8.7000e-004
tblVehicleEF	SBUS	0.03	8.3040e-003
tblVehicleEF	SBUS	1.53	0.46
tblVehicleEF	SBUS	1.7580e-003	4.1400e-004
tblVehicleEF	SBUS	0.08	0.07
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.43	0.04
tblVehicleEF	UBUS	0.23	1.86
tblVehicleEF	UBUS	0.05	2.1860e-003
tblVehicleEF	UBUS	3.04	14.11
tblVehicleEF	UBUS	7.59	0.14
tblVehicleEF	UBUS	1,937.16	1,668.67
tblVehicleEF	UBUS	126.43	1.40
tblVehicleEF	UBUS	4.75	0.71
tblVehicleEF	UBUS	13.02	0.02
tblVehicleEF	UBUS	0.54	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.10	5.1160e-003
tblVehicleEF	UBUS	1.3960e-003	1.5000e-005
tblVehicleEF	UBUS	0.23	0.03
tblVehicleEF	UBUS	3.0000e-003	8.3320e-003
tblVehicleEF	UBUS	0.10	4.8930e-003
tblVehicleEF	UBUS	1.2840e-003	1.4000e-005

tblVehicleEF	UBUS	2.5990e-003	6.1000e-005
tblVehicleEF	UBUS	0.04	8.1400e-004
tblVehicleEF	UBUS	1.5170e-003	3.6000e-005
tblVehicleEF	UBUS	0.23	0.03
tblVehicleEF	UBUS	9.4350e-003	4.9280e-003
tblVehicleEF	UBUS	0.65	9.2610e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.4020e-003	1.4000e-005
tblVehicleEF	UBUS	2.5990e-003	6.1000e-005
tblVehicleEF	UBUS	0.04	8.1400e-004
tblVehicleEF	UBUS	1.5170e-003	3.6000e-005
tblVehicleEF	UBUS	0.48	1.90
tblVehicleEF	UBUS	9.4350e-003	4.9280e-003
tblVehicleEF	UBUS	0.71	0.01
tblVehicleTrips	ST_TR	42.04	30.05
tblVehicleTrips	SU_TR	20.43	14.60
tblVehicleTrips	WD_TR	44.32	31.68
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	SepticTankPercent	10.33	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					
2021	0.7561	2.0826	1.8232	3.1400e-003	0.0289	0.1059	0.1348	0.0146	0.1011	0.1157	0.0000	262.6457	262.6457	0.0543	0.0000	264.0020
2022	4.2400e-003	0.0420	0.0526	8.0000e-005	0.0000	2.2000e-003	2.2000e-003	0.0000	2.0200e-003	2.0200e-003	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348
Maximum	**0.7561**	**2.0826**	**1.8232**	**3.1400e-003**	**0.0289**	**0.1059**	**0.1348**	**0.0146**	**0.1011**	**0.1157**	**0.0000**	**262.6457**	**262.6457**	**0.0543**	**0.0000**	**264.0020**

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					
2021	0.5915	1.7262	1.9378	3.1400e-003	0.0130	0.0176	0.0306	6.5700e-003	0.0174	0.0239	0.0000	262.6454	262.6454	0.0543	0.0000	264.0017
2022	1.8900e-003	0.0398	0.0584	8.0000e-005	0.0000	3.6000e-004	3.6000e-004	0.0000	3.6000e-004	3.6000e-004	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348
Maximum	**0.5915**	**1.7262**	**1.9378**	**3.1400e-003**	**0.0130**	**0.0176**	**0.0306**	**6.5700e-003**	**0.0174**	**0.0239**	**0.0000**	**262.6454**	**262.6454**	**0.0543**	**0.0000**	**264.0017**

	ROG	NOx	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	**21.96**	**16.88**	**-6.41**	**0.00**	**55.02**	**83.41**	**77.41**	**54.97**	**82.80**	**79.35**	**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	**1-4-2021**	**4-3-2021**	0.6553	0.4825
2	**4-4-2021**	**7-3-2021**	0.5874	0.4659
3	**7-4-2021**	**10-3-2021**	0.5938	0.4710
4	**10-4-2021**	**1-3-2022**	1.0012	0.8988
5	**1-4-2022**	**4-3-2022**	0.0367	0.0331
		Highest	1.0012	0.8988

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	0.2145	2.0000e-005	2.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Energy	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	56.2442	56.2442	7.0600e-003	1.5500e-003	56.8814
Mobile	0.3324	0.4720	2.3770	6.5500e-003	0.7804	4.9500e-003	0.7854	0.2088	4.6400e-003	0.2134	0.0000	640.7737	640.7737	0.0293	0.0000	641.5057
Waste						0.0000	0.0000		0.0000	0.0000	10.0176	0.0000	10.0176	0.5920	0.0000	24.8182
Water						0.0000	0.0000		0.0000	0.0000	1.2317	2.5058	3.7375	4.5900e-003	2.7500e-003	4.6717
Total	**0.5475**	**0.4775**	**2.3838**	**6.5800e-003**	**0.7804**	**5.3700e-003**	**0.7858**	**0.2088**	**5.0600e-003**	**0.2139**	**11.2493**	**699.5281**	**710.7774**	**0.6330**	**4.3000e-003**	**727.8817**

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	0.2145	2.0000e-005	2.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Energy	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	56.2442	56.2442	7.0600e-003	1.5500e-003	56.8814
Mobile	0.3324	0.4720	2.3770	6.5500e-003	0.7804	4.9500e-003	0.7854	0.2088	4.6400e-003	0.2134	0.0000	640.7737	640.7737	0.0293	0.0000	641.5057
Waste						0.0000	0.0000		0.0000	0.0000	10.0176	0.0000	10.0176	0.5920	0.0000	24.8182
Water						0.0000	0.0000		0.0000	0.0000	1.2317	2.5058	3.7375	4.5900e-003	2.7500e-003	4.6717

Total	0.5475	0.4775	2.3838	6.5800e-003	0.7804	5.3700e-003	0.7858	0.2088	5.0600e-003	0.2139	11.2493	699.5281	710.7774	0.6330	4.3000e-003	727.8817

	ROG	NOx	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	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/3/2021	5	3	
3	Grading	Grading	2/4/2021	2/11/2021	5	6	
4	Trenching/Foundation	Trenching	2/4/2021	2/11/2021	5	6	
5	Building Construction	Building Construction	2/12/2021	12/16/2021	5	220	
6	Architectural Coating	Architectural Coating	12/17/2021	12/30/2021	5	10	
7	Paving	Paving	12/31/2021	1/13/2022	5	10	

Acres of Grading (Site Preparation Phase): 2.76

Acres of Grading (Grading Phase): 2.76

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 70,500; Non-Residential Outdoor: 23,500; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48

Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching/Foundation	Excavators	1	8.00	158	0.38
Trenching/Foundation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40

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	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	0.00	0.00	0.00	10.80	7.30	7.30	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	10.80	7.30	7.30	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.4700e-003	0.1446	0.1525	2.4000e-004		2.8100e-003	2.8100e-003		2.6600e-003	2.6600e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**8.4700e-003**	**0.1446**	**0.1525**	**2.4000e-004**		**2.8100e-003**	**2.8100e-003**		**2.6600e-003**	**2.6600e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

Mitigated Construction Off-Site

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

3.3 Site Preparation - 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					
Fugitive Dust					9.3700e-003	0.0000	9.3700e-003	4.5000e-003	0.0000	4.5000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6900e-003	0.0418	0.0214	5.0000e-005		1.7500e-003	1.7500e-003		1.6100e-003	1.6100e-003	0.0000	4.2141	4.2141	1.3600e-003	0.0000	4.2482
Total	**3.6900e-003**	**0.0418**	**0.0214**	**5.0000e-005**	**9.3700e-003**	**1.7500e-003**	**0.0111**	**4.5000e-003**	**1.6100e-003**	**6.1100e-003**	**0.0000**	**4.2141**	**4.2141**	**1.3600e-003**	**0.0000**	**4.2482**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.2200e-003	0.0000	4.2200e-003	2.0300e-003	0.0000	2.0300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5500e-003	0.0262	0.0262	5.0000e-005		3.7000e-004	3.7000e-004		3.5000e-004	3.5000e-004	0.0000	4.2141	4.2141	1.3600e-003	0.0000	4.2481

Total	**1.5500e-003**	**0.0262**	**0.0262**	**5.0000e-005**	**4.2200e-003**	**3.7000e-004**	**4.5900e-003**	**2.0300e-003**	**3.5000e-004**	**2.3800e-003**	**0.0000**	**4.2141**	**4.2141**	**1.3600e-003**	**0.0000**	**4.2481**

Mitigated Construction Off-Site

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

3.4 Grading - 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					
Fugitive Dust					0.0195	0.0000	0.0195	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9900e-003	0.0557	0.0234	5.0000e-005		2.4500e-003	2.4500e-003		2.2600e-003	2.2600e-003	0.0000	4.7146	4.7146	1.5200e-003	0.0000	4.7527
Total	**4.9900e-003**	**0.0557**	**0.0234**	**5.0000e-005**	**0.0195**	**2.4500e-003**	**0.0220**	**0.0101**	**2.2600e-003**	**0.0124**	**0.0000**	**4.7146**	**4.7146**	**1.5200e-003**	**0.0000**	**4.7527**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.7900e-003	0.0000	8.7900e-003	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1700e-003	0.0332	0.0298	5.0000e-005		6.9000e-004	6.9000e-004		6.5000e-004	6.5000e-004	0.0000	4.7146	4.7146	1.5200e-003	0.0000	4.7527
Total	**2.1700e-003**	**0.0332**	**0.0298**	**5.0000e-005**	**8.7900e-003**	**6.9000e-004**	**9.4800e-003**	**4.5400e-003**	**6.5000e-004**	**5.1900e-003**	**0.0000**	**4.7146**	**4.7146**	**1.5200e-003**	**0.0000**	**4.7527**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Trenching/Foundation - 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	1.2500e-003	0.0122	0.0166	2.0000e-005		6.5000e-004	6.5000e-004		6.0000e-004	6.0000e-004	0.0000	2.1802	2.1802	7.1000e-004	0.0000	2.1978
Total	**1.2500e-003**	**0.0122**	**0.0166**	**2.0000e-005**		**6.5000e-004**	**6.5000e-004**		**6.0000e-004**	**6.0000e-004**	**0.0000**	**2.1802**	**2.1802**	**7.1000e-004**	**0.0000**	**2.1978**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.1000e-004	0.0126	0.0188	2.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	2.1802	2.1802	7.1000e-004	0.0000	2.1978
Total	**6.1000e-004**	**0.0126**	**0.0188**	**2.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**2.1802**	**2.1802**	**7.1000e-004**	**0.0000**	**2.1978**

Mitigated Construction Off-Site

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

3.6 Building Construction - 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	0.2250	1.7630	1.6019	2.7500e-003		0.0899	0.0899		0.0861	0.0861	0.0000	228.4136	228.4136	0.0449	0.0000	229.5371
Total	**0.2250**	**1.7630**	**1.6019**	**2.7500e-003**		**0.0899**	**0.0899**		**0.0861**	**0.0861**	**0.0000**	**228.4136**	**228.4136**	**0.0449**	**0.0000**	**229.5371**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0785	1.4984	1.6949	2.7500e-003		0.0135	0.0135		0.0135	0.0135	0.0000	228.4133	228.4133	0.0449	0.0000	229.5368

Total	**0.0785**	**1.4984**	**1.6949**	**2.7500e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**228.4133**	**228.4133**	**0.0449**	**0.0000**	**229.5368**

Mitigated Construction Off-Site

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

3.7 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	0.4996					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.5007**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4996					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	6.7800e-003	9.1600e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.4999**	**6.7800e-003**	**9.1600e-003**	**1.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 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	5.3000e-004	5.3200e-003	5.8900e-003	1.0000e-005		2.9000e-004	2.9000e-004		2.7000e-004	2.7000e-004	0.0000	0.7752	0.7752	2.5000e-004	0.0000	0.7814
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3000e-004**	**5.3200e-003**	**5.8900e-003**	**1.0000e-005**		**2.9000e-004**	**2.9000e-004**		**2.7000e-004**	**2.7000e-004**	**0.0000**	**0.7752**	**0.7752**	**2.5000e-004**	**0.0000**	**0.7814**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1000e-004	4.4300e-003	6.4900e-003	1.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.7752	0.7752	2.5000e-004	0.0000	0.7814
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1000e-004**	**4.4300e-003**	**6.4900e-003**	**1.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.7752**	**0.7752**	**2.5000e-004**	**0.0000**	**0.7814**

Mitigated Construction Off-Site

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

3.8 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2400e-003	0.0420	0.0526	8.0000e-005		2.2000e-003	2.2000e-003		2.0200e-003	2.0200e-003	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2400e-003**	**0.0420**	**0.0526**	**8.0000e-005**		**2.2000e-003**	**2.2000e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**6.9795**	**6.9795**	**2.2100e-003**	**0.0000**	**7.0348**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8900e-003	0.0398	0.0584	8.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	6.9795	6.9795	2.2100e-003	0.0000	7.0348

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.8900e-003**	**0.0398**	**0.0584**	**8.0000e-005**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**6.9795**	**6.9795**	**2.2100e-003**	**0.0000**	**7.0348**

Mitigated Construction Off-Site

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

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	0.3324	0.4720	2.3770	6.5500e-003	0.7804	4.9500e-003	0.7854	0.2088	4.6400e-003	0.2134	0.0000	640.7737	640.7737	0.0293	0.0000	641.5057
Unmitigated	0.3324	0.4720	2.3770	6.5500e-003	0.7804	4.9500e-003	0.7854	0.2088	4.6400e-003	0.2134	0.0000	640.7737	640.7737	0.0293	0.0000	641.5057

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Strip Mall	1,488.96	1,412.35	686.20	2,099,582	2,099,582
Total	1,488.96	1,412.35	686.20	2,099,582	2,099,582

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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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
Parking Lot	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728
Strip Mall	0.595423	0.053963	0.171400	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.004780	0.000900	0.000728

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	50.3000	50.3000	6.9500e-003	1.4400e-003	50.9019
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	50.3000	50.3000	6.9500e-003	1.4400e-003	50.9019
NaturalGas Mitigated	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795
NaturalGas Unmitigated	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795

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					
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
Strip Mall	111390	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795
Total		**6.0000e-004**	**5.4600e-003**	**4.5900e-003**	**3.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**5.9442**	**5.9442**	**1.1000e-004**	**1.1000e-004**	**5.9795**

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					
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
Strip Mall	111390	6.0000e-004	5.4600e-003	4.5900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9442	5.9442	1.1000e-004	1.1000e-004	5.9795
Total		**6.0000e-004**	**5.4600e-003**	**4.5900e-003**	**3.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**5.9442**	**5.9442**	**1.1000e-004**	**1.1000e-004**	**5.9795**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	25629.1	2.4413	3.4000e-004	7.0000e-005	2.4705
Strip Mall	502430	47.8587	6.6100e-003	1.3700e-003	48.4314
Total		**50.3000**	**6.9500e-003**	**1.4400e-003**	**50.9019**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	25629.1	2.4413	3.4000e-004	7.0000e-005	2.4705
Strip Mall	502430	47.8587	6.6100e-003	1.3700e-003	48.4314
Total		**50.3000**	**6.9500e-003**	**1.4400e-003**	**50.9019**

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	0.2145	2.0000e-005	2.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Unmitigated	0.2145	2.0000e-005	2.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003

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	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1883					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Total	**0.2145**	**2.0000e-005**	**2.2600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.4100e-003**	**4.4100e-003**	**1.0000e-005**	**0.0000**	**4.7000e-003**

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	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1883					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	2.1000e-004	2.0000e-005	2.2600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4100e-003	4.4100e-003	1.0000e-005	0.0000	4.7000e-003
Total	**0.2145**	**2.0000e-005**	**2.2600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.4100e-003**	**4.4100e-003**	**1.0000e-005**	**0.0000**	**4.7000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.7375	4.5900e-003	2.7500e-003	4.6717
Unmitigated	3.7375	4.5900e-003	2.7500e-003	4.6717

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.48141 / 2.13377	3.7375	4.5900e-003	2.7500e-003	4.6717
Total		**3.7375**	**4.5900e-003**	**2.7500e-003**	**4.6717**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.48141 / 2.13377	3.7375	4.5900e-003	2.7500e-003	4.6717
Total		**3.7375**	**4.5900e-003**	**2.7500e-003**	**4.6717**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.0176	0.5920	0.0000	24.8182
Unmitigated	10.0176	0.5920	0.0000	24.8182

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	49.35	10.0176	0.5920	0.0000	24.8182
Total		**10.0176**	**0.5920**	**0.0000**	**24.8182**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	49.35	10.0176	0.5920	0.0000	24.8182
Total		**10.0176**	**0.5920**	**0.0000**	**24.8182**

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: EMFAC2017 Calculations

CalEEMod EMFAC2017 Fleet Mix Input - 2022

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.589038	0.052546	0.179703	0.107443	0.021069	0.005192	0.013353	0.021839	0.00166	0.001275	0.005191	0.000925	0.000766

CalEEMod EMFAC2017 Emission Factors Input - 2022

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.005343	0.003284	0.003437	0.024800935	0.00717	0	0	0.048997	0
A	CH4_RUNEX	0.002248	0.004836	0.003607	0.004478	0.009345	0.007554	0.005639	0.052585925	0.005785	1.380648	0.328946	0.006571	0.012398
A	CH4_STREX	0.051795	0.069372	0.071097	0.08502	0.016256	0.00923	0.009448	4.88958E-07	0.017883	0.002807	0.256691	0.004579	0.023973
A	CO_IDLEX	0	0	0	0	0.18688	0.1398	0.373927	5.939212974	0.557851	0	0	2.079372	0
A	CO_RUNEX	0.607269	1.059488	0.847805	0.953228	0.84003	0.662247	0.48465	0.525080736	0.588103	10.36518	19.18808	0.537165	1.342528
A	CO_STREX	2.225266	2.431284	2.874644	3.299939	1.126373	0.667192	1.160112	0.005867798	1.923202	0.139137	9.0045	0.677269	2.245874
A	CO2_NBIO_IDLEX	0	0	0	0	9.01529	14.10449	75.80618	1105.703068	95.81839	0	0	347.4661	0
A	CO2_NBIO_RUNEX	251.4274	299.5611	326.1739	395.088	808.8534	782.5523	1131.308	1510.656581	1365.971	1606.765	210.2729	1071.122	1557.001
A	CO2_NBIO_STREX	53.28137	64.30628	70.58253	84.62409	12.11898	8.089337	9.182511	0.05211087	15.55885	1.643992	61.39967	3.822154	19.21033
A	NOX_IDLEX	0	0	0	0	0.060128	0.102328	0.564558	5.917348542	0.468192	0	0	3.611525	0
A	NOX_RUNEX	0.037733	0.0906	0.076274	0.097308	0.824914	0.995012	2.060754	3.510881156	1.734968	0.733263	1.151611	5.089161	1.431508
A	NOX_STREX	0.188557	0.249039	0.294454	0.359248	0.338594	0.193845	1.380182	2.046637573	1.015211	0.019431	0.270649	0.769051	0.247359
A	PM10_IDLEX	0	0	0	0	0.000808	0.001408	0.001235	0.003362027	0.000715	0	0	0.004201	0
A	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.060884359	0.13034	0.069383	0.01176	0.7448	0.13034
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009711	0.010728	0.012	0.035493021	0.012	0.033326	0.004	0.010942	0.01308
A	PM10_RUNEX	0.001421	0.001904	0.001436	0.001589	0.010855	0.01624	0.03679	0.035043993	0.015536	0.005278	0.001937	0.032642	0.025443
A	PM10_STREX	0.001817	0.002399	0.001798	0.002011	0.00027	0.000141	0.00012	9.00263E-07	0.000137	1.66E-06	0.003161	4.25E-05	0.000291
A	PM25_IDLEX	0	0	0	0	0.000773	0.001347	0.001181	0.003216588	0.000684	0	0	0.004019	0
A	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.026093297	0.05586	0.029736	0.00504	0.3192	0.05586
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002428	0.002682	0.003	0.008873255	0.003	0.008332	0.001	0.002735	0.00327
A	PM25_RUNEX	0.001309	0.001753	0.001322	0.001466	0.010335	0.01551	0.035192	0.03352798	0.014852	0.005049	0.001812	0.031217	0.024294
A	PM25_STREX	0.001671	0.002206	0.001653	0.00185	0.000248	0.00013	0.00011	8.27759E-07	0.000126	1.52E-06	0.002978	3.91E-05	0.000268
A	ROG_DIURN	0.041382	0.090019	0.063144	0.072881	0.002147	0.001165	0.000448	3.39912E-06	0.001063	0.000194	1.817765	0.000496	0.785269
A	ROG_HTSK	0.096607	0.172083	0.125931	0.142746	0.080009	0.045477	0.020585	0.000152206	0.015802	0.002987	0.704215	0.004802	0.065771
A	ROG_IDLEX	0	0	0	0	0.022035	0.016392	0.019513	0.429371666	0.048969	0	0	0.230769	0
A	ROG_RESTL	0.03618	0.071206	0.059319	0.069401	0.001082	0.000583	0.000222	1.88626E-06	0.000468	0.000122	0.995009	0.000204	0.269886
A	ROG_RUNEX	0.008754	0.021087	0.01476	0.019073	0.097642	0.115345	0.091706	0.085274048	0.056753	0.020127	2.228751	0.089365	0.077715
A	ROG_RUNLS	0.21113	0.623148	0.428684	0.457495	0.550052	0.307842	0.118998	0.000923478	0.17424	0.021356	2.060677	0.032628	1.59462
A	ROG_STREX	0.233011	0.341709	0.333251	0.42358	0.08236	0.046498	0.051477	2.55882E-06	0.092027	0.012079	1.954835	0.026129	0.101688
A	SO2_IDLEX	0	0	0	0	8.75E-05	0.000135	0.000719	0.010296635	0.00091	0	0	0.003305	0
A	SO2_RUNEX	9.14E-05	0.002599	0.010781	0.00388	0.007901	0.007559	0.010781	0.013852696	0.01315	0.011284	0.002081	0.010222	0.015286
A	SO2_STREX	0	0	9.09E-05	0.000832	0.00012	8.01E-05	9.09E-05	5.15679E-07	0.000154	1.63E-05	0.000608	3.78E-05	0.00019
A	TOG_DIURN	0.041382	0.090019	0.063144	0.072881	0.002147	0.001165	0.000448	3.39912E-06	0.001063	0.000194	1.817765	0.000496	0.785269
A	TOG_HTSK	0.096607	0.172083	0.125931	0.142746	0.080009	0.045477	0.020585	0.000152206	0.015802	0.002987	0.704215	0.004802	0.065771
A	TOG_IDLEX	0	0	0	0	0.03114	0.022172	0.026023	0.493694047	0.062813	0	0	0.329531	0
A	TOG_RESTL	0.03618	0.071206	0.059319	0.069401	0.001082	0.000583	0.000222	1.88626E-06	0.000468	0.000122	0.995009	0.000204	0.269886
A	TOG_RUNEX	0.012729	0.030729	0.021497	0.027692	0.120865	0.135327	0.107209	0.146060834	0.070712	1.409517	2.753726	0.106685	0.10403
A	TOG_RUNLS	0.21113	0.623148	0.428684	0.457495	0.550052	0.307842	0.118998	0.000923478	0.17424	0.021356	2.060677	0.032628	1.59462
A	TOG_STREX	0.255117	0.374126	0.364867	0.463761	0.090174	0.05091	0.05636	2.80159E-06	0.100758	0.013225	2.127328	0.028608	0.111335

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	13	0	260	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	2808	0	0
Site Preparation	8	0	24	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	259.2	0	0
Grading	8	0	48	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	518.4	0	0
Trenching/Foundation	5	0	30	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	324	0	0
Building Construction	46	20	10120	4400	394	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	109296	32120	2876.2
Architectural Coating	9	0	90	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	972	0	0
Paving	15	0	150	0	181	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	1620	0	1321.3

Number of Days Per Year				
2021	1/4/21	12/31/21	362	
2022	1/1/22	1/13/22	13	
			375	**269** ***Total Workdays***

Summary of Construction Traffic Emissions (EMFAC2017)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2
					Grams						
Hauling	834.05	21782.48	6080.13484	65.625	1255.05	663.69	1918.7	188.85	394.84	583.69	7140733.514
Vendor	6653.95	141613.44	40711.2	447.473	9603.88	5806.54	15410.4	1445.08	3471.40	4916.48	48164338.98
Worker	10060.87	9109.89	113606.5	309.564	34623.48	5379.59	40003.1	5209.73	2237.42	7447.16	32859689.04
Total (g)	17548.87	172505.8098	160397.783	822.6624082	45482.4149	11849.8264	57332.2413	6843.658349	6103.667712	12947.32606	88164761.53
Total (lbs)	38.69	380.31	353.62	1.81	100.27	26.1	126.40	15.09	13.46	28.54	194370.0277
Total (tons)	0.0193	0.190	0.177	0.001	0.050	0.0131	0.0632	0.0075	0.007	0.014	97.19
Total (MT)											88.16

Summary of Construction Traffic Emissions (EMFAC2017) - 1 Mile

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2
					Grams						
Hauling	330.51	6866.45	3629.74062	14.021	171.93	95.17	267.1	25.87	58.16	84.02	1518501.805
Vendor	2260.20	40443.62	21096.8	86.307	1315.60	818.81	2134.4	197.96	497.91	695.87	9280955.572
Worker	8730.48	3112.88	34411.0	28.857	3205.88	516.91	3722.8	482.38	224.45	706.83	3619905.757
Total (g)	11321.19	50422.94908	59137.5074	129.1849806	4693.403	1430.886963	6124.28996	706.20803	780.5188401	1486.72687	14419363.13
Total (lbs)	24.96	111.16	130.38	0.28	10.35	3.2	13.50	1.56	1.72	3.28	31789.25416
Total (tons)	0.0125	0.056	0.065	0.000	0.005	0.0016	0.0068	0.0008	0.001	0.002	15.89
Total (MT)											14.42

CalEEMod EMFAC2017 Fleet Mix Input - 2030

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.595423	0.053963	0.1714	0.106522	0.021043	0.005556	0.013639	0.023425	0.001443	0.001178	0.00478	0.0009	0.000728

CalEEMod EMFAC2017 Emission Factors Input - 2030

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004148	0.002505	0.003832	0.024231453	0.007098	0	0	0.070082	0
A	CH4_RUNEX	0.000959	0.001671	0.001726	0.001772	0.005195	0.005339	0.001034	0.04518098	0.002197	1.859484	0.319087	0.004404	0.005027
A	CH4_STREX	0.028931	0.035248	0.041821	0.043924	0.009023	0.004811	0.008383	4.34672E-07	0.015222	0.002186	0.24786	0.006338	0.019545
A	CO_IDLEX	0	0	0	0	0.17731	0.131894	0.405402	6.28489984	0.644155	0	0	2.927328	0
A	CO_RUNEX	0.411156	0.540474	0.559142	0.551517	0.468742	0.489111	0.152189	0.405949458	0.262856	14.11073	17.60732	0.374881	0.311691
A	CO_STREX	1.716961	1.849789	2.287973	2.324828	0.890393	0.484256	0.872515	0.006685308	1.577018	0.139137	9.199577	0.858725	1.635194
A	CO2_NBIO_IDLEX	0	0	0	0	8.251826	13.00041	65.09769	930.0496847	97.36242	0	0	337.4754	0
A	CO2_NBIO_RUNEX	213.8884	258.4057	267.3331	322.2663	698.5465	679.813	993.4479	1226.348086	1210.85	1668.671	209.7572	970.5049	1350.267
A	CO2_NBIO_STREX	45.12682	55.17203	57.56738	67.91602	10.09364	6.438033	8.550649	0.051649278	13.46187	1.401901	59.22586	5.059627	15.54123
A	NOX_IDLEX	0	0	0	0	0.045908	0.074209	0.341766	5.199426871	0.431935	0	0	2.710433	0
A	NOX_RUNEX	0.019319	0.033468	0.034489	0.035665	0.299902	0.384329	1.428316	2.517362076	1.448391	0.706433	1.137409	3.086533	1.063099
A	NOX_STREX	0.125333	0.151052	0.168209	0.179169	0.225227	0.124883	1.689216	2.314548745	1.129093	0.015157	0.270173	1.184451	0.23668
A	PM10_IDLEX	0	0	0	0	0.000915	0.001502	0.000162	0.002145897	0.000142	0	0	0.002048	0
A	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.061109857	0.13034	0.069383	0.01176	0.7448	0.13034
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009901	0.010844	0.012	0.035621239	0.012	0.033326	0.004	0.010676	0.013189
A	PM10_RUNEX	0.000929	0.00107	0.001025	0.001034	0.007019	0.013839	0.007006	0.023790073	0.007882	0.005116	0.002138	0.021245	0.016043
A	PM10_STREX	0.001275	0.001461	0.00134	0.001344	0.00021	0.000106	0.000112	5.80093E-07	0.000156	1.52E-05	0.002862	6.76E-05	0.000212
A	PM25_IDLEX	0	0	0	0	0.000875	0.001437	0.000155	0.002053066	0.000136	0	0	0.00196	0
A	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.026189939	0.05586	0.029736	0.00504	0.3192	0.05586
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002475	0.002711	0.003	0.00890531	0.003	0.008332	0.001	0.002669	0.003297
A	PM25_RUNEX	0.000855	0.000984	0.000944	0.000954	0.006671	0.013218	0.006696	0.022760894	0.007526	0.004893	0.001994	0.02031	0.015312
A	PM25_STREX	0.001172	0.001344	0.001232	0.001236	0.000193	9.76E-05	0.000103	5.33374E-07	0.000144	1.4E-05	0.002676	6.22E-05	0.000195
A	ROG_DIURN	0.024903	0.046388	0.048996	0.057349	0.001403	0.000642	0.000289	1.32994E-06	0.001062	6.14E-05	1.786807	0.00087	0.347564
A	ROG_HTSK	0.061657	0.093564	0.089096	0.0981	0.054855	0.024352	0.013852	5.78076E-05	0.015622	0.000814	0.631299	0.008304	0.028392
A	ROG_IDLEX	0	0	0	0	0.01734	0.013466	0.01847	0.422100311	0.050126	0	0	0.322319	0
A	ROG_RESTL	0.022934	0.041206	0.048532	0.056738	0.000772	0.000374	0.000168	7.97633E-07	0.000487	3.58E-05	0.946881	0.000414	0.1401
A	ROG_RUNEX	0.003247	0.0065	0.006553	0.006887	0.072661	0.0982	0.011844	0.024014489	0.016744	0.026969	2.128511	0.060159	0.038911
A	ROG_RUNLS	0.170512	0.364405	0.336782	0.340289	0.429696	0.143744	0.071507	0.000284481	0.181965	0.004928	1.487321	0.053902	0.535482
A	ROG_STREX	0.118715	0.154126	0.182707	0.199251	0.043726	0.022756	0.041407	2.2699E-06	0.076636	0.009261	1.877593	0.036024	0.074231
A	SO2_IDLEX	0	0	0	0	7.99E-05	0.000124	0.000618	0.00865265	0.000924	0	0	0.003219	0
A	SO2_RUNEX	9E-05	0.002567	0.00948	0.002976	0.006812	0.006557	0.00948	0.011212041	0.011649	0.010417	0.002076	0.009288	0.013242
A	SO2_STREX	0	0	8.46E-05	0.000628	9.99E-05	6.37E-05	8.46E-05	5.11111E-07	0.000133	1.39E-05	0.000586	5.01E-05	0.000154
A	TOG_DIURN	0.024903	0.046388	0.048996	0.057349	0.001403	0.000642	0.000289	1.32994E-06	0.001062	6.14E-05	1.786807	0.00087	0.347564
A	TOG_HTSK	0.061657	0.093564	0.089096	0.0981	0.054855	0.024352	0.013852	5.78076E-05	0.015622	0.000814	0.631299	0.008304	0.028392
A	TOG_IDLEX	0	0	0	0	0.02413	0.017772	0.025282	0.485180108	0.063906	0	0	0.463821	0
A	TOG_RESTL	0.022934	0.041206	0.048532	0.056738	0.000772	0.000374	0.000168	7.97633E-07	0.000487	3.58E-05	0.946881	0.000414	0.1401
A	TOG_RUNEX	0.004716	0.009483	0.009524	0.009983	0.08579	0.112949	0.014288	0.071682245	0.021563	1.898202	2.666273	0.071678	0.048331
A	TOG_RUNLS	0.170512	0.364405	0.336782	0.340289	0.429696	0.143744	0.071507	0.000284481	0.181965	0.004928	1.487321	0.053902	0.535482
A	TOG_STREX	0.129977	0.168749	0.200041	0.218155	0.047875	0.024915	0.045336	2.48526E-06	0.083906	0.01014	2.04481	0.039442	0.081274

Attachment 4: Construction Health Risk Calculations

Berryessa Jackson Retail Development, San Jose, CA

DPM Emissions and Modeling Emission Rates - Without Design Feature Controls

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021-2022	Construction	0.1090	DPM_CONST	218.0	0.06635	8.36E-03	10866	7.69E-07

Construction Hours
hr/day = 9 (7am - 4pm)
days/yr = 365
hours/year = 3285

DPM Emissions and Modeling Emission Rates - With AQ-1 & AQ-2

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021-2022	Construction	0.00417	DPM_CONST	8.3	0.00254	3.20E-04	10866	2.94E-08

Construction Hours
hr/day = 9 (7am - 4pm)
days/yr = 365
hours/year = 3285

Berryessa Jackson Retail Development, San Jose, CA

PM2.5 Fugitive Dust Emissions for Modeling - Without Design Feature Controls

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 $g/s/m^2$
2021-2022	Construction	F25_CONST	0.0111	22.2	0.00674	8.50E-04	10866	7.82E-08

0.002059101

Construction Hours
hr/day = 9 (7am - 4pm)
days/yr = 365
hours/year = 3285

PM2.5 Fugitive Dust Emissions for Modeling - With AQ-1 & AQ-2

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 $g/s/m^2$
2021-2022	Construction	FUG25_CONST	0.0028	5.6	0.00169	2.13E-04	10866	1.96E-08

Construction Hours
hr/day = 9 (7am - 4pm)
days/yr = 365
hours/year = 3285

Berryessa Jackson Retail Development, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site SF and MF Homes - 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 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

		Infant/Child - Exposure Information				Infant/Child	Adult - Exposure Information			Adult			
							Modeled						
Exposure	**Exposure Duration**		**DPM Conc (ug/m3)**		**Age Sensitivity**	**Cancer Risk**	**DPM Conc (ug/m3)**		**Age Sensitivity**	**Cancer Risk**		**Maximum**	
Year	**(years)**	**Age**	**Year**	**Annual**	**Factor**	**(per million)**	**Year**	**Annual**	**Factor**	**(per million)**	**HI**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2021-2022	0.3268	10	4.44							
1	1	0 - 1	2021-2022	0.3268	10	53.67	2021-2022	0.3268	1	0.94	0.065	0.0814	0.4082
2	1	1 - 2	2022-2023	0.0000	10	0.00	2022-2023	0.0000	1	0.00	0.000	0.0000	0.000
3	1	2 - 3	2023	0.0000	3	0.00	2023	0.0000	1	0.00			
4	1	3 - 4	2024	0.0000	3	0.00	2024	0.0000	1	0.00			
5	1	4 - 5	2025	0.0000	3	0.00	2025	0.0000	1	0.00			
6	1	5 - 6	2026	0.0000	3	0.00	2026	0.0000	1	0.00			
7	1	6 - 7	2027	0.0000	3	0.00	2027	0.0000	1	0.00			
8	1	7 - 8	2028	0.0000	3	0.00	2028	0.0000	1	0.00			
9	1	8 - 9	2029	0.0000	3	0.00	2029	0.0000	1	0.00			
10	1	9 - 10	2030	0.0000	3	0.00	2030	0.0000	1	0.00			
11	1	10 - 11	2031	0.0000	3	0.00	2031	0.0000	1	0.00			
12	1	11 - 12	2032	0.0000	3	0.00	2032	0.0000	1	0.00			
13	1	12 - 13	2033	0.0000	3	0.00	2033	0.0000	1	0.00			
14	1	13 - 14	2034	0.0000	3	0.00	2034	0.0000	1	0.00			
15	1	14 - 15	2035	0.0000	3	0.00	2035	0.0000	1	0.00			
16	1	15 - 16	2036	0.0000	3	0.00	2036	0.0000	1	0.00			
17	1	16-17	2037	0.0000	1	0.00	2037	0.0000	1	0.00			
18	1	17-18	2038	0.0000	1	0.00	2038	0.0000	1	0.00			
19	1	18-19	2039	0.0000	1	0.00	2039	0.0000	1	0.00			
20	1	19-20	2040	0.0000	1	0.00	2040	0.0000	1	0.00			
21	1	20-21	2041	0.0000	1	0.00	2041	0.0000	1	0.00			
22	1	21-22	2042	0.0000	1	0.00	2042	0.0000	1	0.00			
23	1	22-23	2043	0.0000	1	0.00	2043	0.0000	1	0.00			
24	1	23-24	2044	0.0000	1	0.00	2044	0.0000	1	0.00			
25	1	24-25	2045	0.0000	1	0.00	2045	0.0000	1	0.00			
26	1	25-26	2046	0.0000	1	0.00	2046	0.0000	1	0.00			
27	1	26-27	2047	0.0000	1	0.00	2047	0.0000	1	0.00			
28	1	27-28	2048	0.0000	1	0.00	2048	0.0000	1	0.00			
29	1	28-29	2049	0.0000	1	0.00	2049	0.0000	1	0.00			
30	1	29-30	2050	0.0000	1	0.00	2050	0.0000	1	0.00			
Total Increased Cancer Risk						**58.1**				**0.94**			

* Third trimester of pregnancy

Berryessa Jackson Retail Development, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MF-Home - 4.55 meter receptor height (Second Floor)

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

		Infant/Child - Exposure Information				Infant/Child	Adult - Exposure Information			Adult		Maximum	
			DPM Conc (ug/m3)		Age	Cancer	Modeled DPM Conc (ug/m3)		Age	Cancer		Fugitive	Total
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**HI**	**PM2.5**	**PM2.5**
0	0.25	-0.25 - 0*	2021-2022	0.4650	10	6.32							
1	1	0 - 1	2021-2022	0.4650	10	76.38	2021-2022	0.4650	1	1.34	0.093	0.0403	0.5053
2	1	1 - 2	2022-2023	0.0000	10	0.00	2022-2023	0.0000	1	0.00	0.000	0.0000	0.000
3	1	2 - 3	2023	0.0000	3	0.00	2023	0.0000	1	0.00			
4	1	3 - 4	2024	0.0000	3	0.00	2024	0.0000	1	0.00			
5	1	4 - 5	2025	0.0000	3	0.00	2025	0.0000	1	0.00			
6	1	5 - 6	2026	0.0000	3	0.00	2026	0.0000	1	0.00			
7	1	6 - 7	2027	0.0000	3	0.00	2027	0.0000	1	0.00			
8	1	7 - 8	2028	0.0000	3	0.00	2028	0.0000	1	0.00			
9	1	8 - 9	2029	0.0000	3	0.00	2029	0.0000	1	0.00			
10	1	9 - 10	2030	0.0000	3	0.00	2030	0.0000	1	0.00			
11	1	10 - 11	2031	0.0000	3	0.00	2031	0.0000	1	0.00			
12	1	11 - 12	2032	0.0000	3	0.00	2032	0.0000	1	0.00			
13	1	12 - 13	2033	0.0000	3	0.00	2033	0.0000	1	0.00			
14	1	13 - 14	2034	0.0000	3	0.00	2034	0.0000	1	0.00			
15	1	14 - 15	2035	0.0000	3	0.00	2035	0.0000	1	0.00			
16	1	15 - 16	2036	0.0000	3	0.00	2036	0.0000	1	0.00			
17	1	16-17	2037	0.0000	1	0.00	2037	0.0000	1	0.00			
18	1	17-18	2038	0.0000	1	0.00	2038	0.0000	1	0.00			
19	1	18-19	2039	0.0000	1	0.00	2039	0.0000	1	0.00			
20	1	19-20	2040	0.0000	1	0.00	2040	0.0000	1	0.00			
21	1	20-21	2041	0.0000	1	0.00	2041	0.0000	1	0.00			
22	1	21-22	2042	0.0000	1	0.00	2042	0.0000	1	0.00			
23	1	22-23	2043	0.0000	1	0.00	2043	0.0000	1	0.00			
24	1	23-24	2044	0.0000	1	0.00	2044	0.0000	1	0.00			
25	1	24-25	2045	0.0000	1	0.00	2045	0.0000	1	0.00			
26	1	25-26	2046	0.0000	1	0.00	2046	0.0000	1	0.00			
27	1	26-27	2047	0.0000	1	0.00	2047	0.0000	1	0.00			
28	1	27-28	2048	0.0000	1	0.00	2048	0.0000	1	0.00			
29	1	28-29	2049	0.0000	1	0.00	2049	0.0000	1	0.00			
30	1	29-30	2050	0.0000	1	0.00	2050	0.0000	1	0.00			
Total Increased Cancer Risk						**82.7**				**1.34**			

* Third trimester of pregnancy

Berryessa Jackson Retail Development, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MF-Home - 7.6 meter receptor height (Third Floor)

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

		Infant/Child - Exposure Information				Infant/Child	Adult - Exposure Information			Adult		Maximum	
			DPM Conc (ug/m3)		Age	Cancer	Modeled DPM Conc (ug/m3)		Age	Cancer		Fugitive	Total
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**HI**	**PM2.5**	**PM2.5**
0	0.25	-0.25 - 0*	2021-2022	0.3452	10	4.70							
1	1	0 - 1	2021-2022	0.3452	10	56.70	2021-2022	0.3452	1	0.99	0.069	0.0263	0.3715
2	1	1 - 2	2022-2023	0.0000	10	0.00	2022-2023	0.0000	1	0.00	0.000	0.0000	0.000
3	1	2 - 3	2023	0.0000	3	0.00	2023	0.0000	1	0.00			
4	1	3 - 4	2024	0.0000	3	0.00	2024	0.0000	1	0.00			
5	1	4 - 5	2025	0.0000	3	0.00	2025	0.0000	1	0.00			
6	1	5 - 6	2026	0.0000	3	0.00	2026	0.0000	1	0.00			
7	1	6 - 7	2027	0.0000	3	0.00	2027	0.0000	1	0.00			
8	1	7 - 8	2028	0.0000	3	0.00	2028	0.0000	1	0.00			
9	1	8 - 9	2029	0.0000	3	0.00	2029	0.0000	1	0.00			
10	1	9 - 10	2030	0.0000	3	0.00	2030	0.0000	1	0.00			
11	1	10 - 11	2031	0.0000	3	0.00	2031	0.0000	1	0.00			
12	1	11 - 12	2032	0.0000	3	0.00	2032	0.0000	1	0.00			
13	1	12 - 13	2033	0.0000	3	0.00	2033	0.0000	1	0.00			
14	1	13 - 14	2034	0.0000	3	0.00	2034	0.0000	1	0.00			
15	1	14 - 15	2035	0.0000	3	0.00	2035	0.0000	1	0.00			
16	1	15 - 16	2036	0.0000	3	0.00	2036	0.0000	1	0.00			
17	1	16-17	2037	0.0000	1	0.00	2037	0.0000	1	0.00			
18	1	17-18	2038	0.0000	1	0.00	2038	0.0000	1	0.00			
19	1	18-19	2039	0.0000	1	0.00	2039	0.0000	1	0.00			
20	1	19-20	2040	0.0000	1	0.00	2040	0.0000	1	0.00			
21	1	20-21	2041	0.0000	1	0.00	2041	0.0000	1	0.00			
22	1	21-22	2042	0.0000	1	0.00	2042	0.0000	1	0.00			
23	1	22-23	2043	0.0000	1	0.00	2043	0.0000	1	0.00			
24	1	23-24	2044	0.0000	1	0.00	2044	0.0000	1	0.00			
25	1	24-25	2045	0.0000	1	0.00	2045	0.0000	1	0.00			
26	1	25-26	2046	0.0000	1	0.00	2046	0.0000	1	0.00			
27	1	26-27	2047	0.0000	1	0.00	2047	0.0000	1	0.00			
28	1	27-28	2048	0.0000	1	0.00	2048	0.0000	1	0.00			
29	1	28-29	2049	0.0000	1	0.00	2049	0.0000	1	0.00			
30	1	29-30	2050	0.0000	1	0.00	2050	0.0000	1	0.00			
Total Increased Cancer Risk						**61.4**				**0.99**			

* Third trimester of pregnancy

Berryessa Jackson Retail Development, San Jose, CA - Construction Impacts - Mitigated w/ AQ-1 & AQ-2
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site SF-Home - 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 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

		Infant/Child - Exposure Information				Infant/Child	Adult - Exposure Information			Adult		Maximum	
			DPM Conc (ug/m3)		Age	Cancer	Modeled DPM Conc (ug/m3)		Age	Cancer			
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**		**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2021-2022	0.0178	10	0.24					**HI**		
1	1	0 - 1	2021-2022	0.0178	10	2.92	2021-2022	0.0178	1	0.05	0.004	0.0101	0.0279
2	1	1 - 2	2022-2023	0.0000	10	0.00	2022-2023	0.0000	1	0.00	0.000	0.0000	0.000
3	1	2 - 3	2023	0.0000	3	0.00	2023	0.0000	1	0.00			
4	1	3 - 4	2024	0.0000	3	0.00	2024	0.0000	1	0.00			
5	1	4 - 5	2025	0.0000	3	0.00	2025	0.0000	1	0.00			
6	1	5 - 6	2026	0.0000	3	0.00	2026	0.0000	1	0.00			
7	1	6 - 7	2027	0.0000	3	0.00	2027	0.0000	1	0.00			
8	1	7 - 8	2028	0.0000	3	0.00	2028	0.0000	1	0.00			
9	1	8 - 9	2029	0.0000	3	0.00	2029	0.0000	1	0.00			
10	1	9 - 10	2030	0.0000	3	0.00	2030	0.0000	1	0.00			
11	1	10 - 11	2031	0.0000	3	0.00	2031	0.0000	1	0.00			
12	1	11 - 12	2032	0.0000	3	0.00	2032	0.0000	1	0.00			
13	1	12 - 13	2033	0.0000	3	0.00	2033	0.0000	1	0.00			
14	1	13 - 14	2034	0.0000	3	0.00	2034	0.0000	1	0.00			
15	1	14 - 15	2035	0.0000	3	0.00	2035	0.0000	1	0.00			
16	1	15 - 16	2036	0.0000	3	0.00	2036	0.0000	1	0.00			
17	1	16-17	2037	0.0000	1	0.00	2037	0.0000	1	0.00			
18	1	17-18	2038	0.0000	1	0.00	2038	0.0000	1	0.00			
19	1	18-19	2039	0.0000	1	0.00	2039	0.0000	1	0.00			
20	1	19-20	2040	0.0000	1	0.00	2040	0.0000	1	0.00			
21	1	20-21	2041	0.0000	1	0.00	2041	0.0000	1	0.00			
22	1	21-22	2042	0.0000	1	0.00	2042	0.0000	1	0.00			
23	1	22-23	2043	0.0000	1	0.00	2043	0.0000	1	0.00			
24	1	23-24	2044	0.0000	1	0.00	2044	0.0000	1	0.00			
25	1	24-25	2045	0.0000	1	0.00	2045	0.0000	1	0.00			
26	1	25-26	2046	0.0000	1	0.00	2046	0.0000	1	0.00			
27	1	26-27	2047	0.0000	1	0.00	2047	0.0000	1	0.00			
28	1	27-28	2048	0.0000	1	0.00	2048	0.0000	1	0.00			
29	1	28-29	2049	0.0000	1	0.00	2049	0.0000	1	0.00			
30	1	29-30	2050	0.0000	1	0.00	2050	0.0000	1	0.00			
Total Increased Cancer Risk						**3.2**				**0.05**			

* Third trimester of pregnancy

Concentrations represent mitigated emissions using equipment with Tier 4 Final Engines, electrified cranes, and no generators

Attachment 5: Risk from Existing TAC Sources

Road Link	Description	Direction	No. Lanes	Link Length (miles)	Link Width (ft)	Link Width (m)	Release Height (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
N_Flk_DPM	Northtbound Flickinger Ave.	NW	2	0.21	24	7.315	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	5,085
S_Flk_DPM	Southbound Flickinger Ave.	SE	2	0.20	22	6.706	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	7,051
N_Flk_XXX	Northtbound Flickinger Ave.	NW	2	0.21	24	7.315	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	5,085
S_Flk_XXX	Southbound Flickinger Ave.	SE	2	0.20	22	6.706	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	7,051
N_Jsk_DPM	Northtbound Jackson Ave.	NW	2	0.27	28	8.534	11.15	3.4	35mph off peak, 30mph AM Peak, 30mph PM peak period	8,392
S_Jsk_DPM	Southbound Jackson Ave.	SE	2	0.27	28	8.534	11.15	3.4	35mph off peak, 30mph AM Peak, 30mph PM peak period	9,238
N_Jsk_XXX	Northtbound Jackson Ave.	NW	2	0.27	28	8.534	4.27	1.3	35mph off peak, 30mph AM Peak, 30mph PM peak period	8,392
S_Jsk_XXX	Southbound Jackson Ave.	SE	2	0.27	28	8.534	4.27	1.3	35mph off peak, 30mph AM Peak, 30mph PM peak period	9,238
W_EBer_DPM	West Leg, Eastbound Berryessa Rd.	NE	3	0.17	33	10.058	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	12,667
W_WBer_DPM	West Leg, Westbound Berryessa Rd.	SW	3	0.18	33	10.058	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	13,668
W_EBer_XXX	West Leg, Eastbound Berryessa Rd.	NE	3	0.17	33	10.058	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	12,667
W_WBer_XXX	West Leg, Westbound Berryessa Rd.	SW	3	0.18	33	10.058	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	13,668
E_EBer_DPM	East Leg, Eastbound Berryessa Rd.	NE	3	0.30	33	10.058	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	16,102
E_WBer_DPM	East Leg, Westbound Berryessa Rd.	SW	3	0.30	33	10.058	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	16,102
E_EBer_XXX	East Leg, Eastbound Berryessa Rd.	NE	3	0.30	33	10.058	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	16,102
E_WBer_XXX	East Leg, Westbound Berryessa Rd.	SW	3	0.30	33	10.058	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	16,102

Emission Factors

	Speed Category	1	2	3
	Travel Speed (mph)	35	30	40
Emisions per vehicle (g/VMT)	DPM	0.00187	0.00196	0.00188
	PM2.5	0.00304	0.00339	0.00288
	TOG Exhaust	0.04088	0.04905	0.03566
	TOG Evap	0.04293	0.05009	0.03756
	Fugitive PM2.5	0.03626	0.03626	0.03626

		Flickinger Ave.		Jackson Ave.		West Berryessa Rd.		East Berryessa Rd.	
Vehicle Type	Truck 1 (MDT)	316		458		685		837	
	Truck 2 (HDT)	425		617		922		1127	
	Non-Truck	11,395		16,554		24,729		30239	
Total	2021 ADT		12,135		17,630		26,336		32,204
	Directional Volume	**7,051**	**5,085**	**8,392**	**9,238**	**12667**	**13668**	**16102**	**16102**
	Average Veh/Hour/Dir	294	212	350	385	528	570	671	671

2021 Hourly Traffic Volumes and DPM Emisssions - Northtbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	DPM g/s
0	0.01079332	55	0.000006
1	0.00678032	34	3.665E-06
2	0.00534058	27	2.887E-06
3	0.00588447	30	3.181E-06
4	0.01172375	60	6.338E-06
5	0.02882171	147	1.558E-05
6	0.04281568	218	2.315E-05
7	0.05387522	274	3.053E-05
8	0.0579319	295	3.28269E-05
9	0.0588369	299	3.18057E-05
10	0.0552361	281	2.98592E-05
11	0.0543814	277	2.93972E-05
12	0.0566318	288	3.06137E-05
13	0.0596478	303	3.22441E-05
14	0.0648395	330	3.50506E-05
15	0.0643708	327	3.47972E-05
16	0.06464357	329	3.66301E-05
17	0.0651272	331	3.69041E-05
18	0.06112545	311	3.30428E-05
19	0.05061289	257	2.736E-05
20	0.04048907	206	2.18873E-05
21	0.03515422	179	1.90035E-05
22	0.02663953	135	1.44006E-05
23	0.01829687	93	9.89081E-06
	TOTAL	5,085	

2021 Hourly Traffic Volumes and DPM Emisssions - Southbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	76	8.071E-06
1	0.00678032	48	5.07E-06
2	0.00534058	38	3.994E-06
3	0.00588447	41	4.4E-06
4	0.01172375	83	8.767E-06
5	0.02882171	203	2.155E-05
6	0.04281568	302	3.202E-05
7	0.05387522	380	4.223E-05
8	0.0579319	408	4.54097E-05
9	0.0588369	415	4.3997E-05
10	0.0552361	389	4.13044E-05
11	0.0543814	383	4.06653E-05
12	0.0566318	399	4.2348E-05
13	0.0596478	421	4.46034E-05
14	0.0648395	457	4.84856E-05
15	0.0643708	454	4.81351E-05
16	0.06464357	456	5.06706E-05
17	0.0651272	459	5.10497E-05
18	0.06112545	431	4.57083E-05
19	0.05061289	357	3.78472E-05
20	0.04048907	285	3.02769E-05
21	0.03515422	248	2.62876E-05
22	0.02663953	188	1.99205E-05
23	0.01829687	129	1.3682E-05
	TOTAL	7,051	

2021 Hourly Traffic Volumes and DPM Emisssions - Northtbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	91	0.000013
1	0.00678032	57	8.059E-06
2	0.00534058	45	6.347E-06
3	0.00588447	49	6.994E-06
4	0.01172375	98	1.393E-05
5	0.02882171	242	3.426E-05
6	0.04281568	359	5.089E-05
7	0.05387522	452	6.359E-05
8	0.0579319	486	6.83769E-05
9	0.0588369	494	6.99288E-05
10	0.0552361	464	6.56492E-05
11	0.0543814	456	6.46335E-05
12	0.0566318	475	6.7308E-05
13	0.0596478	501	7.08927E-05
14	0.0648395	544	7.70631E-05
15	0.0643708	540	7.6506E-05
16	0.06464357	542	7.62987E-05
17	0.0651272	547	7.68695E-05
18	0.06112545	513	7.26489E-05
19	0.05061289	425	6.01545E-05
20	0.04048907	340	4.81221E-05
21	0.03515422	295	4.17815E-05
22	0.02663953	224	3.16616E-05
23	0.01829687	154	2.17462E-05
	TOTAL	8,392	

DPM

2021 Hourly Traffic Volumes and DPM Emisssions - Southbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	100	1.404E-05
1	0.00678032	63	8.82E-06
2	0.00534058	49	6.947E-06
3	0.00588447	54	7.655E-06
4	0.01172375	108	1.525E-05
5	0.02882171	266	3.749E-05
6	0.04281568	396	5.57E-05
7	0.05387522	498	6.96E-05
8	0.0579319	535	7.4841E-05
9	0.0588369	544	7.65397E-05
10	0.0552361	510	7.18555E-05
11	0.0543814	502	7.07437E-05
12	0.0566318	523	7.36711E-05
13	0.0596478	551	7.75946E-05
14	0.0648395	599	8.43484E-05
15	0.0643708	595	8.37386E-05
16	0.06464357	597	8.35117E-05
17	0.0651272	602	8.41365E-05
18	0.06112545	565	7.95169E-05
19	0.05061289	468	6.58413E-05
20	0.04048907	374	5.26714E-05
21	0.03515422	325	4.57314E-05
22	0.02663953	246	3.46548E-05
23	0.01829687	169	2.3802E-05
		TOTAL	9,238

2021 Hourly Traffic Volumes and DPM Emisssions - West Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	137	0.000012
1	0.00678032	86	7.768E-06
2	0.00534058	68	6.118E-06
3	0.00588447	75	6.741E-06
4	0.01172375	149	1.343E-05
5	0.02882171	365	3.302E-05
6	0.04281568	542	4.905E-05
7	0.05387522	682	6.47E-05
8	0.0579319	734	6.95698E-05
9	0.0588369	745	6.74055E-05
10	0.0552361	700	6.32803E-05
11	0.0543814	689	6.23012E-05
12	0.0566318	717	6.48792E-05
13	0.0596478	756	6.83345E-05
14	0.0648395	821	7.42823E-05
15	0.0643708	815	7.37453E-05
16	0.06464357	819	7.76297E-05
17	0.0651272	825	7.82105E-05
18	0.06112545	774	7.00273E-05
19	0.05061289	641	5.79838E-05
20	0.04048907	513	4.63856E-05
21	0.03515422	445	4.02738E-05
22	0.02663953	337	3.05191E-05
23	0.01829687	232	2.09615E-05
		TOTAL	12,667

2021 Hourly Traffic Volumes and DPM Emisssions - West Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	148	1.353E-05
1	0.00678032	93	8.498E-06
2	0.00534058	73	6.693E-06
3	0.00588447	80	7.375E-06
4	0.01172375	160	1.469E-05
5	0.02882171	394	3.612E-05
6	0.04281568	585	5.366E-05
7	0.05387522	736	7.078E-05
8	0.0579319	792	7.61071E-05
9	0.0588369	804	7.37394E-05
10	0.0552361	755	6.92266E-05
11	0.0543814	743	6.81555E-05
12	0.0566318	774	7.09758E-05
13	0.0596478	815	7.47557E-05
14	0.0648395	886	8.12624E-05
15	0.0643708	880	8.06749E-05
16	0.06464357	884	8.49244E-05
17	0.0651272	890	8.55598E-05
18	0.06112545	835	7.66076E-05
19	0.05061289	692	6.34324E-05
20	0.04048907	553	5.07444E-05
21	0.03515422	480	4.40583E-05
22	0.02663953	364	3.33869E-05
23	0.01829687	250	2.29312E-05
		TOTAL	13,668

2021 Hourly Traffic Volumes and DPM Emisssions - East Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	174	0.000027	8	0.0579319	933	0.000150347	16	0.06464357	1041	0.000167766
1	0.00678032	109	1.679E-05	9	0.0588369	947	0.00014567	17	0.0651272	1049	0.000169021
2	0.00534058	86	1.322E-05	10	0.0552361	889	0.000136755	18	0.06112545	984	0.000151336
3	0.00588447	95	1.457E-05	11	0.0543814	876	0.000134639	19	0.05061289	815	0.000125309
4	0.01172375	189	2.903E-05	12	0.0566318	912	0.000140211	20	0.04048907	652	0.000100244
5	0.02882171	464	7.136E-05	13	0.0596478	960	0.000147678	21	0.03515422	566	8.70358E-05
6	0.04281568	689	0.000106	14	0.0648395	1044	0.000160532	22	0.02663953	429	6.59549E-05
7	0.05387522	867	0.0001398	15	0.0643708	1036	0.000159371	23	0.01829687	295	4.52999E-05
								TOTAL		16,102	

2021 Hourly Traffic Volumes and DPM Emisssions - East Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	174	2.668E-05	8	0.0579319	933	0.000150095	16	0.06464357	1041	0.000167485
1	0.00678032	109	1.676E-05	9	0.0588369	947	0.000145426	17	0.0651272	1049	0.000168738
2	0.00534058	86	1.32E-05	10	0.0552361	889	0.000136526	18	0.06112545	984	0.000151082
3	0.00588447	95	1.454E-05	11	0.0543814	876	0.000134413	19	0.05061289	815	0.000125099
4	0.01172375	189	2.898E-05	12	0.0566318	912	0.000139976	20	0.04048907	652	0.000100076
5	0.02882171	464	7.124E-05	13	0.0596478	960	0.00014743	21	0.03515422	566	8.689E-05
6	0.04281568	689	0.0001058	14	0.0648395	1044	0.000160262	22	0.02663953	429	6.58444E-05
7	0.05387522	867	0.0001396	15	0.0643708	1036	0.000159104	23	0.01829687	295	4.5224E-05
								TOTAL		16,102	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - Northtbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	55	0.000009	8	0.0579319	295	5.69604E-05	16	0.06464357	329	6.35595E-05
1	0.00678032	34	5.965E-06	9	0.0588369	299	5.17652E-05	17	0.0651272	331	6.4035E-05
2	0.00534058	27	4.699E-06	10	0.0552361	281	4.85972E-05	18	0.06112545	311	5.37787E-05
3	0.00588447	30	5.177E-06	11	0.0543814	277	4.78453E-05	19	0.05061289	257	4.45297E-05
4	0.01172375	60	1.031E-05	12	0.0566318	288	4.98251E-05	20	0.04048907	206	3.56226E-05
5	0.02882171	147	2.536E-05	13	0.0596478	303	5.24787E-05	21	0.03515422	179	3.0929E-05
6	0.04281568	218	3.767E-05	14	0.0648395	330	5.70464E-05	22	0.02663953	135	2.34377E-05
7	0.05387522	274	5.297E-05	15	0.0643708	327	5.6634E-05	23	0.01829687	93	1.60977E-05
									TOTAL	5,085	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - Southbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	76	1.314E-05	8	0.0579319	408	7.87937E-05	16	0.06464357	456	8.79222E-05
1	0.00678032	48	8.252E-06	9	0.0588369	415	7.16071E-05	17	0.0651272	459	8.858E-05
2	0.00534058	38	6.5E-06	10	0.0552361	389	6.72247E-05	18	0.06112545	431	7.43924E-05
3	0.00588447	41	7.162E-06	11	0.0543814	383	6.61846E-05	19	0.05061289	357	6.15981E-05
4	0.01172375	83	1.427E-05	12	0.0566318	399	6.89234E-05	20	0.04048907	285	4.9277E-05
5	0.02882171	203	3.508E-05	13	0.0596478	421	7.2594E-05	21	0.03515422	248	4.27842E-05
6	0.04281568	302	5.211E-05	14	0.0648395	457	7.89126E-05	22	0.02663953	188	3.24215E-05
7	0.05387522	380	7.328E-05	15	0.0643708	454	7.83421E-05	23	0.01829687	129	2.22681E-05
									TOTAL	7,051	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - Northtbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	91	0.000020	8	0.0579319	486	0.000111287	16	0.06464357	542	0.00012418
1	0.00678032	57	1.236E-05	9	0.0588369	494	0.000107294	17	0.0651272	547	0.000125109
2	0.00534058	45	9.739E-06	10	0.0552361	464	0.000100727	18	0.06112545	513	0.000111467
3	0.00588447	49	1.073E-05	11	0.0543814	456	9.91689E-05	19	0.05061289	425	9.22966E-05
4	0.01172375	98	2.138E-05	12	0.0566318	475	0.000103273	20	0.04048907	340	7.3835E-05
5	0.02882171	242	5.256E-05	13	0.0596478	501	0.000108773	21	0.03515422	295	6.41065E-05
6	0.04281568	359	7.808E-05	14	0.0648395	544	0.00011824	22	0.02663953	224	4.85793E-05
7	0.05387522	452	0.0001035	15	0.0643708	540	0.000117385	23	0.01829687	154	3.33658E-05
									TOTAL	8,392	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - Southbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	100	2.154E-05	8	0.0579319	535	0.000121807	16	0.06464357	597	0.000135919
1	0.00678032	63	1.353E-05	9	0.0588369	544	0.000117437	17	0.0651272	602	0.000136936
2	0.00534058	49	1.066E-05	10	0.0552361	510	0.00011025	18	0.06112545	565	0.000122005
3	0.00588447	54	1.175E-05	11	0.0543814	502	0.000108544	19	0.05061289	468	0.000101022
4	0.01172375	108	2.34E-05	12	0.0566318	523	0.000113036	20	0.04048907	374	8.08152E-05
5	0.02882171	266	5.753E-05	13	0.0596478	551	0.000119056	21	0.03515422	325	7.01669E-05
6	0.04281568	396	8.546E-05	14	0.0648395	599	0.000129418	22	0.02663953	246	5.31718E-05
7	0.05387522	498	0.0001133	15	0.0643708	595	0.000128482	23	0.01829687	169	3.65201E-05
								TOTAL		9,238	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - West Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	137	0.000020	8	0.0579319	734	0.000120716	16	0.06464357	819	0.000134701
1	0.00678032	86	1.264E-05	9	0.0588369	745	0.000109705	17	0.0651272	825	0.000135709
2	0.00534058	68	9.958E-06	10	0.0552361	700	0.000102992	18	0.06112545	774	0.000113973
3	0.00588447	75	1.097E-05	11	0.0543814	689	0.000101398	19	0.05061289	641	9.43713E-05
4	0.01172375	149	2.186E-05	12	0.0566318	717	0.000105594	20	0.04048907	513	7.54947E-05
5	0.02882171	365	5.374E-05	13	0.0596478	756	0.000111218	21	0.03515422	445	6.55475E-05
6	0.04281568	542	7.983E-05	14	0.0648395	821	0.000120898	22	0.02663953	337	4.96713E-05
7	0.05387522	682	0.0001123	15	0.0643708	815	0.000120024	23	0.01829687	232	3.41158E-05
								TOTAL		12,667	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - West Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	148	2.202E-05	8	0.0579319	792	0.000132059	16	0.06464357	884	0.000147359
1	0.00678032	93	1.383E-05	9	0.0588369	804	0.000120014	17	0.0651272	890	0.000148461
2	0.00534058	73	1.089E-05	10	0.0552361	755	0.000112669	18	0.06112545	835	0.000124682
3	0.00588447	80	1.2E-05	11	0.0543814	743	0.000110926	19	0.05061289	692	0.000103239
4	0.01172375	160	2.391E-05	12	0.0566318	774	0.000115516	20	0.04048907	553	8.25888E-05
5	0.02882171	394	5.879E-05	13	0.0596478	815	0.000121668	21	0.03515422	480	7.17069E-05
6	0.04281568	585	8.733E-05	14	0.0648395	886	0.000132258	22	0.02663953	364	5.43388E-05
7	0.05387522	736	0.0001228	15	0.0643708	880	0.000131302	23	0.01829687	250	3.73216E-05
								TOTAL		13,668	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - East Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	174	0.000043	8	0.0579319	933	0.000260879	16	0.06464357	1041	0.000291103
1	0.00678032	109	2.732E-05	9	0.0588369	947	0.000237085	17	0.0651272	1049	0.00029328
2	0.00534058	86	2.152E-05	10	0.0552361	889	0.000222575	18	0.06112545	984	0.000246306
3	0.00588447	95	2.371E-05	11	0.0543814	876	0.000219131	19	0.05061289	815	0.000203946
4	0.01172375	189	4.724E-05	12	0.0566318	912	0.000228199	20	0.04048907	652	0.000163152
5	0.02882171	464	0.0001161	13	0.0596478	960	0.000240352	21	0.03515422	566	0.000141655
6	0.04281568	689	0.0001725	14	0.0648395	1044	0.000261272	22	0.02663953	429	0.000107345
7	0.05387522	867	0.0002426	15	0.0643708	1036	0.000259383	23	0.01829687	295	7.37276E-05
									TOTAL	16,102	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - East Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	174	4.342E-05	8	0.0579319	933	0.000260441	16	0.06464357	1041	0.000290615
1	0.00678032	109	2.728E-05	9	0.0588369	947	0.000236687	17	0.0651272	1049	0.000292789
2	0.00534058	86	2.148E-05	10	0.0552361	889	0.000222202	18	0.06112545	984	0.000245894
3	0.00588447	95	2.367E-05	11	0.0543814	876	0.000218764	19	0.05061289	815	0.000203604
4	0.01172375	189	4.716E-05	12	0.0566318	912	0.000227817	20	0.04048907	652	0.000162878
5	0.02882171	464	0.0001159	13	0.0596478	960	0.000239949	21	0.03515422	566	0.000141417
6	0.04281568	689	0.0001722	14	0.0648395	1044	0.000260835	22	0.02663953	429	0.000107165
7	0.05387522	867	0.0002422	15	0.0643708	1036	0.000258949	23	0.01829687	295	7.36041E-05
									TOTAL	16,102	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi Northtbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	55	0.000128	8	0.0579319	295	0.000823123	16	0.06464357	329	0.000918486
1	0.00678032	34	8.029E-05	9	0.0588369	299	0.000696708	17	0.0651272	331	0.000925357
2	0.00534058	27	6.324E-05	10	0.0552361	281	0.00065407	18	0.06112545	311	0.000723808
3	0.00588447	30	6.968E-05	11	0.0543814	277	0.00064395	19	0.05061289	257	0.000599325
4	0.01172375	60	0.0001388	12	0.0566318	288	0.000670597	20	0.04048907	206	0.000479445
5	0.02882171	147	0.0003413	13	0.0596478	303	0.000706311	21	0.03515422	179	0.000416273
6	0.04281568	218	0.000507	14	0.0648395	330	0.000767788	22	0.02663953	135	0.000315448
7	0.05387522	274	0.0007655	15	0.0643708	327	0.000762237	23	0.01829687	93	0.00021666
									TOTAL	5,085	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi Southbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	76	0.0001768	8	0.0579319	408	0.001138631	16	0.06464357	456	0.001270546
1	0.00678032	48	0.0001111	9	0.0588369	415	0.00096376	17	0.0651272	459	0.001280052
2	0.00534058	38	8.748E-05	10	0.0552361	389	0.000904778	18	0.06112545	431	0.001001247
3	0.00588447	41	9.639E-05	11	0.0543814	383	0.000890779	19	0.05061289	357	0.000829049
4	0.01172375	83	0.000192	12	0.0566318	399	0.00092764	20	0.04048907	285	0.000663219
5	0.02882171	203	0.0004721	13	0.0596478	421	0.000977043	21	0.03515422	248	0.000575833
6	0.04281568	302	0.0007013	14	0.0648395	457	0.001062085	22	0.02663953	188	0.000436361
7	0.05387522	380	0.0010589	15	0.0643708	454	0.001054406	23	0.01829687	129	0.000299706
									TOTAL	7,051	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi Northtbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	91	0.000243	8	0.0579319	486	0.001497806	16	0.06464357	542	0.001671333
1	0.00678032	57	0.0001529	9	0.0588369	494	0.001327011	17	0.0651272	547	0.001683837
2	0.00534058	45	0.0001205	10	0.0552361	464	0.001245798	18	0.06112545	513	0.001378627
3	0.00588447	49	0.0001327	11	0.0543814	456	0.001226523	19	0.05061289	425	0.001141526
4	0.01172375	98	0.0002644	12	0.0566318	475	0.001277276	20	0.04048907	340	0.000913193
5	0.02882171	242	0.00065	13	0.0596478	501	0.001345301	21	0.03515422	295	0.000792871
6	0.04281568	359	0.0009657	14	0.0648395	544	0.001462395	22	0.02663953	224	0.00060083
7	0.05387522	452	0.0013929	15	0.0643708	540	0.001451822	23	0.01829687	154	0.000412669
									TOTAL	8,392	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi Southbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	100	0.0002664	8	0.0579319	535	0.001639404	16	0.06464357	597	0.001829336
1	0.00678032	63	0.0001674	9	0.0588369	544	0.001452462	17	0.0651272	602	0.001843022
2	0.00534058	49	0.0001318	10	0.0552361	510	0.001363572	18	0.06112545	565	0.001508958
3	0.00588447	54	0.0001453	11	0.0543814	502	0.001342474	19	0.05061289	468	0.001249442
4	0.01172375	108	0.0002894	12	0.0566318	523	0.001398026	20	0.04048907	374	0.000999523
5	0.02882171	266	0.0007115	13	0.0596478	551	0.001472481	21	0.03515422	325	0.000867826
6	0.04281568	396	0.001057	14	0.0648395	599	0.001600645	22	0.02663953	246	0.00065763
7	0.05387522	498	0.0015246	15	0.0643708	595	0.001589073	23	0.01829687	169	0.000451681
									TOTAL	9,238	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi West Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	137	0.000271	8	0.0579319	734	0.001744437	16	0.06464357	819	0.001946538
1	0.00678032	86	0.0001702	9	0.0588369	745	0.001476527	17	0.0651272	825	0.001961101
2	0.00534058	68	0.000134	10	0.0552361	700	0.001386164	18	0.06112545	774	0.001533959
3	0.00588447	75	0.0001477	11	0.0543814	689	0.001364717	19	0.05061289	641	0.001270144
4	0.01172375	149	0.0002942	12	0.0566318	717	0.001421189	20	0.04048907	513	0.001016084
5	0.02882171	365	0.0007233	13	0.0596478	756	0.001496877	21	0.03515422	445	0.000882204
6	0.04281568	542	0.0010745	14	0.0648395	821	0.001627165	22	0.02663953	337	0.000668526
7	0.05387522	682	0.0016223	15	0.0643708	815	0.001615401	23	0.01829687	232	0.000459165
									TOTAL	12,667	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi West Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	148	1.353E-05	8	0.0579319	792	7.61071E-05	16	0.06464357	884	8.49244E-05
1	0.00678032	93	8.498E-06	9	0.0588369	804	7.37394E-05	17	0.0651272	890	8.55598E-05
2	0.00534058	73	6.693E-06	10	0.0552361	755	6.92266E-05	18	0.06112545	835	7.66076E-05
3	0.00588447	80	7.375E-06	11	0.0543814	743	6.81555E-05	19	0.05061289	692	6.34324E-05
4	0.01172375	160	1.469E-05	12	0.0566318	774	7.09758E-05	20	0.04048907	553	5.07444E-05
5	0.02882171	394	3.612E-05	13	0.0596478	815	7.47557E-05	21	0.03515422	480	4.40583E-05
6	0.04281568	585	5.366E-05	14	0.0648395	886	8.12624E-05	22	0.02663953	364	3.33869E-05
7	0.05387522	736	7.078E-05	15	0.0643708	880	8.06749E-05	23	0.01829687	250	2.29312E-05
									TOTAL	13,668	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi East Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	174	0.000027	8	0.0579319	933	0.000150347	16	0.06464357	1041	0.000167766
1	0.00678032	109	1.679E-05	9	0.0588369	947	0.00014567	17	0.0651272	1049	0.000169021
2	0.00534058	86	1.322E-05	10	0.0552361	889	0.000136755	18	0.06112545	984	0.000151336
3	0.00588447	95	1.457E-05	11	0.0543814	876	0.000134639	19	0.05061289	815	0.000125309
4	0.01172375	189	2.903E-05	12	0.0566318	912	0.000140211	20	0.04048907	652	0.000100244
5	0.02882171	464	7.136E-05	13	0.0596478	960	0.000147678	21	0.03515422	566	8.70358E-05
6	0.04281568	689	0.000106	14	0.0648395	1044	0.000160532	22	0.02663953	429	6.59549E-05
7	0.05387522	867	0.0001398	15	0.0643708	1036	0.000159371	23	0.01829687	295	4.52999E-05
									TOTAL	16,102	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi East Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	174	2.668E-05	8	0.0579319	933	0.000150095	16	0.06464357	1041	0.000167485
1	0.00678032	109	1.676E-05	9	0.0588369	947	0.000145426	17	0.0651272	1049	0.000168738
2	0.00534058	86	1.32E-05	10	0.0552361	889	0.000136526	18	0.06112545	984	0.000151082
3	0.00588447	95	1.454E-05	11	0.0543814	876	0.000134413	19	0.05061289	815	0.000125099
4	0.01172375	189	2.898E-05	12	0.0566318	912	0.000139976	20	0.04048907	652	0.000100076
5	0.02882171	464	7.124E-05	13	0.0596478	960	0.00014743	21	0.03515422	566	8.689E-05
6	0.04281568	689	0.0001058	14	0.0648395	1044	0.000160262	22	0.02663953	429	6.58444E-05
7	0.05387522	867	0.0001396	15	0.0643708	1036	0.000159104	23	0.01829687	295	4.5224E-05
									TOTAL	16,102	

2021 Hourly Traffic Volumes and TOG Evaporative Em Northtbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	55	0.000134	8	0.0579319	295	0.00084057	16	0.06464357	329	0.000937953
1	0.00678032	34	8.433E-05	9	0.0588369	299	0.000731743	17	0.0651272	331	0.00094497
2	0.00534058	27	6.642E-05	10	0.0552361	281	0.000686961	18	0.06112545	311	0.000760206
3	0.00588447	30	7.318E-05	11	0.0543814	277	0.000676332	19	0.05061289	257	0.000629463
4	0.01172375	60	0.0001458	12	0.0566318	288	0.000704319	20	0.04048907	206	0.000503555
5	0.02882171	147	0.0003585	13	0.0596478	303	0.000741829	21	0.03515422	179	0.000437206
6	0.04281568	218	0.0005325	14	0.0648395	330	0.000806397	22	0.02663953	135	0.000331311
7	0.05387522	274	0.0007817	15	0.0643708	327	0.000800567	23	0.01829687	93	0.000227555
								TOTAL		5,085	

2021 Hourly Traffic Volumes and TOG Evaporative Em Southbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	76	0.0001857	8	0.0579319	408	0.001162764	16	0.06464357	456	0.001297476
1	0.00678032	48	0.0001166	9	0.0588369	415	0.001012224	17	0.0651272	459	0.001307183
2	0.00534058	38	9.188E-05	10	0.0552361	389	0.000950276	18	0.06112545	431	0.001051596
3	0.00588447	41	0.0001012	11	0.0543814	383	0.000935573	19	0.05061289	357	0.000870739
4	0.01172375	83	0.0002017	12	0.0566318	399	0.000974288	20	0.04048907	285	0.00069657
5	0.02882171	203	0.0004958	13	0.0596478	421	0.001026175	21	0.03515422	248	0.00060479
6	0.04281568	302	0.0007366	14	0.0648395	457	0.001115493	22	0.02663953	188	0.000458304
7	0.05387522	380	0.0010813	15	0.0643708	454	0.001107428	23	0.01829687	129	0.000314778
								TOTAL		7,051	

2021 Hourly Traffic Volumes and TOG Evaporative Em Northtbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	91	0.000256	8	0.0579319	486	0.001573125	16	0.06464357	542	0.001755379
1	0.00678032	57	0.0001611	9	0.0588369	494	0.001397987	17	0.0651272	547	0.001768511
2	0.00534058	45	0.0001269	10	0.0552361	464	0.001312431	18	0.06112545	513	0.001452364
3	0.00588447	49	0.0001398	11	0.0543814	456	0.001292124	19	0.05061289	425	0.001202582
4	0.01172375	98	0.0002786	12	0.0566318	475	0.001345593	20	0.04048907	340	0.000962036
5	0.02882171	242	0.0006848	13	0.0596478	501	0.001417255	21	0.03515422	295	0.000835278
6	0.04281568	359	0.0010173	14	0.0648395	544	0.001540612	22	0.02663953	224	0.000632966
7	0.05387522	452	0.001463	15	0.0643708	540	0.001529474	23	0.01829687	154	0.000434741
								TOTAL		8,392	

2021 Hourly Traffic Volumes and TOG Evaporative Em Southbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	100	0.0002807	8	0.0579319	535	0.001721844	16	0.06464357	597	0.001921327
1	0.00678032	63	0.0001763	9	0.0588369	544	0.001530148	17	0.0651272	602	0.001935701
2	0.00534058	49	0.0001389	10	0.0552361	510	0.001436504	18	0.06112545	565	0.001589666
3	0.00588447	54	0.000153	11	0.0543814	502	0.001414278	19	0.05061289	468	0.00131627
4	0.01172375	108	0.0003049	12	0.0566318	523	0.001472801	20	0.04048907	374	0.001052984
5	0.02882171	266	0.0007496	13	0.0596478	551	0.001551238	21	0.03515422	325	0.000914242
6	0.04281568	396	0.0011135	14	0.0648395	599	0.001686257	22	0.02663953	246	0.000692804
7	0.05387522	498	0.0016013	15	0.0643708	595	0.001674066	23	0.01829687	169	0.00047584
									TOTAL	9,238	

2021 Hourly Traffic Volumes and TOG Evaporative Em West Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	137	0.000284	8	0.0579319	734	0.001781411	16	0.06464357	819	0.001987795
1	0.00678032	86	0.0001787	9	0.0588369	745	0.001550776	17	0.0651272	825	0.002002666
2	0.00534058	68	0.0001408	10	0.0552361	700	0.001455869	18	0.06112545	774	0.001611096
3	0.00588447	75	0.0001551	11	0.0543814	689	0.001433343	19	0.05061289	641	0.001334014
4	0.01172375	149	0.000309	12	0.0566318	717	0.001492655	20	0.04048907	513	0.001067179
5	0.02882171	365	0.0007597	13	0.0596478	756	0.00157215	21	0.03515422	445	0.000926567
6	0.04281568	542	0.0011285	14	0.0648395	821	0.001708989	22	0.02663953	337	0.000702144
7	0.05387522	682	0.0016567	15	0.0643708	815	0.001696634	23	0.01829687	232	0.000482254
									TOTAL	12,667	

2021 Hourly Traffic Volumes and TOG Evaporative Em West Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	148	0.0003112	8	0.0579319	792	0.001948806	16	0.06464357	884	0.002174583
1	0.00678032	93	0.0001955	9	0.0588369	804	0.001696499	17	0.0651272	890	0.002190852
2	0.00534058	73	0.000154	10	0.0552361	755	0.001592673	18	0.06112545	835	0.001762487
3	0.00588447	80	0.0001697	11	0.0543814	743	0.001568031	19	0.05061289	692	0.001459369
4	0.01172375	160	0.000338	12	0.0566318	774	0.001632917	20	0.04048907	553	0.001167459
5	0.02882171	394	0.000831	13	0.0596478	815	0.001719881	21	0.03515422	480	0.001013634
6	0.04281568	585	0.0012345	14	0.0648395	886	0.001869578	22	0.02663953	364	0.000768122
7	0.05387522	736	0.0018123	15	0.0643708	880	0.001856062	23	0.01829687	250	0.000527571
									TOTAL	13,668	

2021 Hourly Traffic Volumes and TOG Evaporative Em East Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	174	0.000615	8	0.0579319	933	0.003849807	16	0.06464357	1041	0.004295824
1	0.00678032	109	0.0003862	9	0.0588369	947	0.003351382	17	0.0651272	1049	0.004327963
2	0.00534058	86	0.0003042	10	0.0552361	889	0.003146278	18	0.06112545	984	0.00348174
3	0.00588447	95	0.0003352	11	0.0543814	876	0.003097598	19	0.05061289	815	0.002882939
4	0.01172375	189	0.0006678	12	0.0566318	912	0.003225778	20	0.04048907	652	0.002306281
5	0.02882171	464	0.0016417	13	0.0596478	960	0.003397574	21	0.03515422	566	0.002002404
6	0.04281568	689	0.0024388	14	0.0648395	1044	0.003693296	22	0.02663953	429	0.001517403
7	0.05387522	867	0.0035802	15	0.0643708	1036	0.003666595	23	0.01829687	295	0.0010422
									TOTAL	16,102	

2021 Hourly Traffic Volumes and TOG Evaporative Em East Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	174	0.0006138	8	0.0579319	933	0.003843356	16	0.06464357	1041	0.004288625
1	0.00678032	109	0.0003856	9	0.0588369	947	0.003345766	17	0.0651272	1049	0.00432071
2	0.00534058	86	0.0003037	10	0.0552361	889	0.003141006	18	0.06112545	984	0.003475906
3	0.00588447	95	0.0003346	11	0.0543814	876	0.003092408	19	0.05061289	815	0.002878108
4	0.01172375	189	0.0006667	12	0.0566318	912	0.003220372	20	0.04048907	652	0.002302416
5	0.02882171	464	0.0016389	13	0.0596478	960	0.00339188	21	0.03515422	566	0.001999049
6	0.04281568	689	0.0024347	14	0.0648395	1044	0.003687107	22	0.02663953	429	0.00151486
7	0.05387522	867	0.0035742	15	0.0643708	1036	0.003660451	23	0.01829687	295	0.001040454
									TOTAL	16,102	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss Northtbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	55	0.000113	8	0.0579319	295	0.00060854	16	0.06464357	329	0.000679042
1	0.00678032	34	7.122E-05	9	0.0588369	299	0.000618046	17	0.0651272	331	0.000684122
2	0.00534058	27	5.61E-05	10	0.0552361	281	0.000580222	18	0.06112545	311	0.000642086
3	0.00588447	30	6.181E-05	11	0.0543814	277	0.000571245	19	0.05061289	257	0.000531658
4	0.01172375	60	0.0001232	12	0.0566318	288	0.000594883	20	0.04048907	206	0.000425313
5	0.02882171	147	0.0003028	13	0.0596478	303	0.000626565	21	0.03515422	179	0.000369274
6	0.04281568	218	0.0004498	14	0.0648395	330	0.0006811	22	0.02663953	135	0.000279832
7	0.05387522	274	0.0005659	15	0.0643708	327	0.000676176	23	0.01829687	93	0.000192198
									TOTAL	5,085	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss Southbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	76	0.0001568	8	0.0579319	408	0.000841797	16	0.06464357	456	0.000939322
1	0.00678032	48	9.852E-05	9	0.0588369	415	0.000854947	17	0.0651272	459	0.00094635
2	0.00534058	38	7.76E-05	10	0.0552361	389	0.000802624	18	0.06112545	431	0.000888201
3	0.00588447	41	8.551E-05	11	0.0543814	383	0.000790206	19	0.05061289	357	0.000735445
4	0.01172375	83	0.0001704	12	0.0566318	399	0.000822905	20	0.04048907	285	0.000588338
5	0.02882171	203	0.0004188	13	0.0596478	421	0.00086673	21	0.03515422	248	0.000510819
6	0.04281568	302	0.0006221	14	0.0648395	457	0.00094217	22	0.02663953	188	0.000387094
7	0.05387522	380	0.0007828	15	0.0643708	454	0.000935358	23	0.01829687	129	0.000265868
									TOTAL	7,051	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss Northtbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	91	0.000248	8	0.0579319	486	0.001328696	16	0.06464357	542	0.001482631
1	0.00678032	57	0.0001555	9	0.0588369	494	0.001349452	17	0.0651272	547	0.001493723
2	0.00534058	45	0.0001225	10	0.0552361	464	0.001266866	18	0.06112545	513	0.001401941
3	0.00588447	49	0.000135	11	0.0543814	456	0.001247264	19	0.05061289	425	0.001160831
4	0.01172375	98	0.0002689	12	0.0566318	475	0.001298877	20	0.04048907	340	0.000928636
5	0.02882171	242	0.000661	13	0.0596478	501	0.001368051	21	0.03515422	295	0.000806279
6	0.04281568	359	0.000982	14	0.0648395	544	0.001487125	22	0.02663953	224	0.00061099
7	0.05387522	452	0.0012357	15	0.0643708	540	0.001476374	23	0.01829687	154	0.000419647
									TOTAL	8,392	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss Southbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	100	0.000271	8	0.0579319	535	0.001454307	16	0.06464357	597	0.001622794
1	0.00678032	63	0.0001702	9	0.0588369	544	0.001477025	17	0.0651272	602	0.001634935
2	0.00534058	49	0.0001341	10	0.0552361	510	0.001386631	18	0.06112545	565	0.001534476
3	0.00588447	54	0.0001477	11	0.0543814	502	0.001365177	19	0.05061289	468	0.001270572
4	0.01172375	108	0.0002943	12	0.0566318	523	0.001421668	20	0.04048907	374	0.001016427
5	0.02882171	266	0.0007235	13	0.0596478	551	0.001497382	21	0.03515422	325	0.000882502
6	0.04281568	396	0.0010748	14	0.0648395	599	0.001627713	22	0.02663953	246	0.000668751
7	0.05387522	498	0.0013525	15	0.0643708	595	0.001615946	23	0.01829687	169	0.00045932
									TOTAL	9,238	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss West Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	137	0.000240	8	0.0579319	734	0.001289673	16	0.06464357	819	0.001439087
1	0.00678032	86	0.0001509	9	0.0588369	745	0.001309819	17	0.0651272	825	0.001449853
2	0.00534058	68	0.0001189	10	0.0552361	700	0.001229658	18	0.06112545	774	0.001360767
3	0.00588447	75	0.000131	11	0.0543814	689	0.001210633	19	0.05061289	641	0.001126738
4	0.01172375	149	0.000261	12	0.0566318	717	0.001260729	20	0.04048907	513	0.000901363
5	0.02882171	365	0.0006416	13	0.0596478	756	0.001327872	21	0.03515422	445	0.000782599
6	0.04281568	542	0.0009532	14	0.0648395	821	0.001443449	22	0.02663953	337	0.000593046
7	0.05387522	682	0.0011994	15	0.0643708	815	0.001433014	23	0.01829687	232	0.000407323
									TOTAL	12,667	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss West Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	148	0.0002629	8	0.0579319	792	0.00141086	16	0.06464357	884	0.001574315
1	0.00678032	93	0.0001651	9	0.0588369	804	0.0014329	17	0.0651272	890	0.001586093
2	0.00534058	73	0.0001301	10	0.0552361	755	0.001345207	18	0.06112545	835	0.001488635
3	0.00588447	80	0.0001433	11	0.0543814	743	0.001324393	19	0.05061289	692	0.001232615
4	0.01172375	160	0.0002855	12	0.0566318	774	0.001379197	20	0.04048907	553	0.000986062
5	0.02882171	394	0.0007019	13	0.0596478	815	0.001452649	21	0.03515422	480	0.000856138
6	0.04281568	585	0.0010427	14	0.0648395	886	0.001579087	22	0.02663953	364	0.000648773
7	0.05387522	736	0.0013121	15	0.0643708	880	0.001567671	23	0.01829687	250	0.000445598
									TOTAL	13,668	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss East Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	174	0.000519	8	0.0579319	933	0.002787112	16	0.06464357	1041	0.003110011
1	0.00678032	109	0.0003262	9	0.0588369	947	0.00283065	17	0.0651272	1049	0.003133279
2	0.00534058	86	0.0002569	10	0.0552361	889	0.002657415	18	0.06112545	984	0.002940754
3	0.00588447	95	0.0002831	11	0.0543814	876	0.002616299	19	0.05061289	815	0.002434993
4	0.01172375	189	0.000564	12	0.0566318	912	0.002724562	20	0.04048907	652	0.001947935
5	0.02882171	464	0.0013866	13	0.0596478	960	0.002869665	21	0.03515422	566	0.001691274
6	0.04281568	689	0.0020599	14	0.0648395	1044	0.003119438	22	0.02663953	429	0.001281631
7	0.05387522	867	0.0025919	15	0.0643708	1036	0.003096886	23	0.01829687	295	0.000880265
									TOTAL	16,102	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss East Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	174	0.0005184	8	0.0579319	933	0.002782442	16	0.06464357	1041	0.0031048
1	0.00678032	109	0.0003257	9	0.0588369	947	0.002825907	17	0.0651272	1049	0.003128028
2	0.00534058	86	0.0002565	10	0.0552361	889	0.002652962	18	0.06112545	984	0.002935826
3	0.00588447	95	0.0002826	11	0.0543814	876	0.002611915	19	0.05061289	815	0.002430913
4	0.01172375	189	0.0005631	12	0.0566318	912	0.002719996	20	0.04048907	652	0.001944671
5	0.02882171	464	0.0013843	13	0.0596478	960	0.002864856	21	0.03515422	566	0.00168844
6	0.04281568	689	0.0020564	14	0.0648395	1044	0.003114211	22	0.02663953	429	0.001279484
7	0.05387522	867	0.0025876	15	0.0643708	1036	0.003091696	23	0.01829687	295	0.00087879
									TOTAL	16,102	

Road Link	Description	Direction	No. Lanes	Link Length (miles)	Link Width (ft)	Link Width (m)	Release Height (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
N_Flk_DPM	Northtbound Flickinger Ave.	NW	2	0.21	24	7.315	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	5,135
S_Flk_DPM	Southbound Flickinger Ave.	SE	2	0.20	22	6.706	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	7,120
N_Flk_XXX	Northtbound Flickinger Ave.	NW	2	0.21	24	7.315	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	5,135
S_Flk_XXX	Southbound Flickinger Ave.	SE	2	0.20	22	6.706	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	7,120
N_Jsk_DPM	Northtbound Jackson Ave.	NW	2	0.27	28	8.534	11.15	3.4	35mph off peak, 30mph AM Peak, 30mph PM peak period	8,763
S_Jsk_DPM	Southbound Jackson Ave.	SE	2	0.27	28	8.534	11.15	3.4	35mph off peak, 30mph AM Peak, 30mph PM peak period	9,647
N_Jsk_XXX	Northtbound Jackson Ave.	NW	2	0.27	28	8.534	4.27	1.3	35mph off peak, 30mph AM Peak, 30mph PM peak period	8,763
S_Jsk_XXX	Southbound Jackson Ave.	SE	2	0.27	28	8.534	4.27	1.3	35mph off peak, 30mph AM Peak, 30mph PM peak period	9,647
W_EBer_DPM	West Leg, Eastbound Berryessa Rd.	NE	3	0.17	33	10.058	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	13,783
W_WBer_DPM	West Leg, Westbound Berryessa Rd.	SW	3	0.18	33	10.058	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	14,872
W_EBer_XXX	West Leg, Eastbound Berryessa Rd.	NE	3	0.17	33	10.058	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	13,783
W_WBer_XXX	West Leg, Westbound Berryessa Rd.	SW	3	0.18	33	10.058	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	14,872
E_EBer_DPM	East Leg, Eastbound Berryessa Rd.	NE	3	0.30	33	10.058	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	16,970
E_WBer_DPM	East Leg, Westbound Berryessa Rd.	SW	3	0.30	33	10.058	11.15	3.4	40mph off peak, 35mph AM Peak, 35mph PM peak period	16,970
E_EBer_XXX	East Leg, Eastbound Berryessa Rd.	NE	3	0.30	33	10.058	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	16,970
E_WBer_XXX	East Leg, Westbound Berryessa Rd.	SW	3	0.30	33	10.058	4.27	1.3	40mph off peak, 35mph AM Peak, 35mph PM peak period	16,970

Emission Factors

	Speed Category	1	2	3
	Travel Speed (mph)	35	30	40
Emisions per vehicle (g/VMT)	DPM	0.00106	0.00109	0.00109
	PM2.5	0.00222	0.0025	0.00209
	TOG Exhaust	0.03573	0.04286	0.03121
	TOG Evap	0.04096	0.04779	0.03584
	Fugitive PM2.5	0.03624	0.03624	0.03624

		Flickinger Ave.		Jackson Ave.		West Berryessa Rd.		East Berryessa Rd.	
Vehicle Type	Truck 1 (MDT)	319		479		745		882	
	Truck 2 (HDT)	429		644		1,003		1188	
	Non-Truck	11,507		17,287		26,907		31870	
Total	2022 ADT		12,255		18,410		28,655		33,940
	Directional Volume	**7,120**	**5,135**	**8,763**	**9,647**	**13783**	**14872**	**16970**	**16970**
	Average Veh/Hour/Dir	297	214	365	402	574	620	707	707

DPM

2021 Hourly Traffic Volumes and DPM Emisssions - Northtbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	55	0.000003	8	0.0579319	297	1.79653E-05	16	0.06464357	332	2.00467E-05
1	0.00678032	35	2.164E-06	9	0.0588369	302	1.87796E-05	17	0.0651272	334	2.01967E-05
2	0.00534058	27	1.705E-06	10	0.0552361	284	1.76303E-05	18	0.06112545	314	1.95101E-05
3	0.00588447	30	1.878E-06	11	0.0543814	279	1.73575E-05	19	0.05061289	260	1.61546E-05
4	0.01172375	60	3.742E-06	12	0.0566318	291	1.80758E-05	20	0.04048907	208	1.29233E-05
5	0.02882171	148	9.199E-06	13	0.0596478	306	1.90384E-05	21	0.03515422	181	1.12205E-05
6	0.04281568	220	1.367E-05	14	0.0648395	333	2.06955E-05	22	0.02663953	137	8.50282E-06
7	0.05387522	277	1.671E-05	15	0.0643708	331	2.05459E-05	23	0.01829687	94	5.84E-06
									TOTAL	5,135	

2021 Hourly Traffic Volumes and DPM Emisssions - Southbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	77	4.766E-06	8	0.0579319	412	2.48515E-05	16	0.06464357	460	2.77307E-05
1	0.00678032	48	2.994E-06	9	0.0588369	419	2.59779E-05	17	0.0651272	464	2.79382E-05
2	0.00534058	38	2.358E-06	10	0.0552361	393	2.43881E-05	18	0.06112545	435	2.69884E-05
3	0.00588447	42	2.598E-06	11	0.0543814	387	2.40107E-05	19	0.05061289	360	2.23468E-05
4	0.01172375	83	5.176E-06	12	0.0566318	403	2.50043E-05	20	0.04048907	288	1.78769E-05
5	0.02882171	205	1.273E-05	13	0.0596478	425	2.6336E-05	21	0.03515422	250	1.55214E-05
6	0.04281568	305	1.89E-05	14	0.0648395	462	2.86282E-05	22	0.02663953	190	1.1762E-05
7	0.05387522	384	2.311E-05	15	0.0643708	458	2.84212E-05	23	0.01829687	130	8.07851E-06
									TOTAL	7,120	

2021 Hourly Traffic Volumes and DPM Emisssions - Northtbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	95	0.000008	8	0.0579319	508	4.15949E-05	16	0.06464357	566	4.64138E-05
1	0.00678032	59	4.747E-06	9	0.0588369	516	4.11953E-05	17	0.0651272	571	4.67611E-05
2	0.00534058	47	3.739E-06	10	0.0552361	484	3.86742E-05	18	0.06112545	536	4.27977E-05
3	0.00588447	52	4.12E-06	11	0.0543814	477	3.80758E-05	19	0.05061289	444	3.54372E-05
4	0.01172375	103	8.209E-06	12	0.0566318	496	3.96514E-05	20	0.04048907	355	2.83489E-05
5	0.02882171	253	2.018E-05	13	0.0596478	523	4.17631E-05	21	0.03515422	308	2.46136E-05
6	0.04281568	375	2.998E-05	14	0.0648395	568	4.53982E-05	22	0.02663953	233	1.8652E-05
7	0.05387522	472	3.868E-05	15	0.0643708	564	4.50699E-05	23	0.01829687	160	1.28108E-05
									TOTAL	8,763	

DPM

2021 Hourly Traffic Volumes and DPM Emisssions - Southbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	104	8.271E-06	8	0.0579319	559	4.55271E-05	16	0.06464357	624	5.08016E-05
1	0.00678032	65	5.196E-06	9	0.0588369	568	4.50898E-05	17	0.0651272	628	5.11817E-05
2	0.00534058	52	4.093E-06	10	0.0552361	533	4.23303E-05	18	0.06112545	590	4.68437E-05
3	0.00588447	57	4.51E-06	11	0.0543814	525	4.16754E-05	19	0.05061289	488	3.87873E-05
4	0.01172375	113	8.985E-06	12	0.0566318	546	4.33999E-05	20	0.04048907	391	3.10289E-05
5	0.02882171	278	2.209E-05	13	0.0596478	575	4.57113E-05	21	0.03515422	339	2.69405E-05
6	0.04281568	413	3.281E-05	14	0.0648395	625	4.969E-05	22	0.02663953	257	2.04153E-05
7	0.05387522	520	4.234E-05	15	0.0643708	621	4.93307E-05	23	0.01829687	177	1.40219E-05
									TOTAL	9,647	

2021 Hourly Traffic Volumes and DPM Emisssions - West Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	149	0.000008	8	0.0579319	798	4.10216E-05	16	0.06464357	891	4.57741E-05
1	0.00678032	93	4.942E-06	9	0.0588369	811	4.28808E-05	17	0.0651272	898	4.61166E-05
2	0.00534058	74	3.892E-06	10	0.0552361	761	4.02565E-05	18	0.06112545	842	4.45487E-05
3	0.00588447	81	4.289E-06	11	0.0543814	750	3.96337E-05	19	0.05061289	698	3.68871E-05
4	0.01172375	162	8.544E-06	12	0.0566318	781	4.12737E-05	20	0.04048907	558	2.95088E-05
5	0.02882171	397	2.101E-05	13	0.0596478	822	4.34718E-05	21	0.03515422	485	2.56207E-05
6	0.04281568	590	3.12E-05	14	0.0648395	894	4.72556E-05	22	0.02663953	367	1.94151E-05
7	0.05387522	743	3.815E-05	15	0.0643708	887	4.6914E-05	23	0.01829687	252	1.33349E-05
									TOTAL	13,783	

2021 Hourly Traffic Volumes and DPM Emisssions - West Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	161	8.605E-06	8	0.0579319	862	4.48763E-05	16	0.06464357	961	5.00754E-05
1	0.00678032	101	5.406E-06	9	0.0588369	875	4.69102E-05	17	0.0651272	969	5.045E-05
2	0.00534058	79	4.258E-06	10	0.0552361	821	4.40393E-05	18	0.06112545	909	4.87349E-05
3	0.00588447	88	4.692E-06	11	0.0543814	809	4.33579E-05	19	0.05061289	753	4.03533E-05
4	0.01172375	174	9.347E-06	12	0.0566318	842	4.51521E-05	20	0.04048907	602	3.22816E-05
5	0.02882171	429	2.298E-05	13	0.0596478	887	4.75568E-05	21	0.03515422	523	2.80282E-05
6	0.04281568	637	3.414E-05	14	0.0648395	964	5.16961E-05	22	0.02663953	396	2.12395E-05
7	0.05387522	801	4.173E-05	15	0.0643708	957	5.13223E-05	23	0.01829687	272	1.4588E-05
									TOTAL	14,872	

2021 Hourly Traffic Volumes and DPM Emisssions - East Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	183	0.000016	8	0.0579319	983	8.80563E-05	16	0.06464357	1097	9.8258E-05
1	0.00678032	115	1.005E-05	9	0.0588369	998	8.72104E-05	17	0.0651272	1105	9.89931E-05
2	0.00534058	91	7.916E-06	10	0.0552361	937	8.18732E-05	18	0.06112545	1037	9.06026E-05
3	0.00588447	100	8.722E-06	11	0.0543814	923	8.06064E-05	19	0.05061289	859	7.50205E-05
4	0.01172375	199	1.738E-05	12	0.0566318	961	8.39419E-05	20	0.04048907	687	6.00146E-05
5	0.02882171	489	4.272E-05	13	0.0596478	1012	8.84124E-05	21	0.03515422	597	5.2107E-05
6	0.04281568	727	6.346E-05	14	0.0648395	1100	9.61078E-05	22	0.02663953	452	3.94862E-05
7	0.05387522	914	8.189E-05	15	0.0643708	1092	9.5413E-05	23	0.01829687	310	2.71204E-05
									TOTAL	16,970	

2021 Hourly Traffic Volumes and DPM Emisssions - East Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	183	1.644E-05	8	0.0579319	983	8.57251E-05	16	0.06464357	1097	9.56568E-05
1	0.00678032	115	1.033E-05	9	0.0588369	998	8.96105E-05	17	0.0651272	1105	9.63724E-05
2	0.00534058	91	8.134E-06	10	0.0552361	937	8.41263E-05	18	0.06112545	1037	9.30961E-05
3	0.00588447	100	8.962E-06	11	0.0543814	923	8.28247E-05	19	0.05061289	859	7.70851E-05
4	0.01172375	199	1.786E-05	12	0.0566318	961	8.6252E-05	20	0.04048907	687	6.16662E-05
5	0.02882171	489	4.39E-05	13	0.0596478	1012	9.08456E-05	21	0.03515422	597	5.3541E-05
6	0.04281568	727	6.521E-05	14	0.0648395	1100	9.87527E-05	22	0.02663953	452	4.05729E-05
7	0.05387522	914	7.972E-05	15	0.0643708	1092	9.80388E-05	23	0.01829687	310	2.78667E-05
									TOTAL	16,970	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - Northtbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	55	0.000007	8	0.0579319	297	3.75577E-05	16	0.06464357	332	4.19089E-05
1	0.00678032	35	4.14E-06	9	0.0588369	302	3.59239E-05	17	0.0651272	334	4.22225E-05
2	0.00534058	27	3.261E-06	10	0.0552361	284	3.37254E-05	18	0.06112545	314	3.73212E-05
3	0.00588447	30	3.593E-06	11	0.0543814	279	3.32036E-05	19	0.05061289	260	3.09026E-05
4	0.01172375	60	7.158E-06	12	0.0566318	291	3.45775E-05	20	0.04048907	208	2.47213E-05
5	0.02882171	148	1.76E-05	13	0.0596478	306	3.64191E-05	21	0.03515422	181	2.1464E-05
6	0.04281568	220	2.614E-05	14	0.0648395	333	3.95889E-05	22	0.02663953	137	1.62652E-05
7	0.05387522	277	3.493E-05	15	0.0643708	331	3.93027E-05	23	0.01829687	94	1.11715E-05
									TOTAL	5,135	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - Southbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	77	9.116E-06	8	0.0579319	412	5.19538E-05	16	0.06464357	460	5.79729E-05
1	0.00678032	48	5.727E-06	9	0.0588369	419	4.96938E-05	17	0.0651272	464	5.84066E-05
2	0.00534058	38	4.511E-06	10	0.0552361	393	4.66525E-05	18	0.06112545	435	5.16267E-05
3	0.00588447	42	4.97E-06	11	0.0543814	387	4.59307E-05	19	0.05061289	360	4.27478E-05
4	0.01172375	83	9.902E-06	12	0.0566318	403	4.78313E-05	20	0.04048907	288	3.41972E-05
5	0.02882171	205	2.434E-05	13	0.0596478	425	5.03787E-05	21	0.03515422	250	2.96913E-05
6	0.04281568	305	3.616E-05	14	0.0648395	462	5.47636E-05	22	0.02663953	190	2.24998E-05
7	0.05387522	384	4.832E-05	15	0.0643708	458	5.43677E-05	23	0.01829687	130	1.54536E-05
									TOTAL	7,120	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - Northtbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	95	0.000016	8	0.0579319	508	9.56644E-05	16	0.06464357	566	0.000106748
1	0.00678032	59	9.925E-06	9	0.0588369	516	8.61216E-05	17	0.0651272	571	0.000107546
2	0.00534058	47	7.817E-06	10	0.0552361	484	8.08509E-05	18	0.06112545	536	8.94714E-05
3	0.00588447	52	8.613E-06	11	0.0543814	477	7.96E-05	19	0.05061289	444	7.40838E-05
4	0.01172375	103	1.716E-05	12	0.0566318	496	8.28939E-05	20	0.04048907	355	5.92653E-05
5	0.02882171	253	4.219E-05	13	0.0596478	523	8.73086E-05	21	0.03515422	308	5.14564E-05
6	0.04281568	375	6.267E-05	14	0.0648395	568	9.49078E-05	22	0.02663953	233	3.89932E-05
7	0.05387522	472	8.897E-05	15	0.0643708	564	9.42217E-05	23	0.01829687	160	2.67818E-05
									TOTAL	8,763	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - Southbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	104	1.729E-05	8	0.0579319	559	0.000104708	16	0.06464357	624	0.000116839
1	0.00678032	65	1.086E-05	9	0.0588369	568	9.42632E-05	17	0.0651272	628	0.000117713
2	0.00534058	52	8.556E-06	10	0.0552361	533	8.84943E-05	18	0.06112545	590	9.79298E-05
3	0.00588447	57	9.428E-06	11	0.0543814	525	8.71251E-05	19	0.05061289	488	8.10875E-05
4	0.01172375	113	1.878E-05	12	0.0566318	546	9.07304E-05	20	0.04048907	391	6.4868E-05
5	0.02882171	278	4.618E-05	13	0.0596478	575	9.55624E-05	21	0.03515422	339	5.6321E-05
6	0.04281568	413	6.86E-05	14	0.0648395	625	0.00010388	22	0.02663953	257	4.26795E-05
7	0.05387522	520	9.738E-05	15	0.0643708	621	0.000103129	23	0.01829687	177	2.93136E-05
									TOTAL	9,647	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - West Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	149	0.000015	8	0.0579319	798	8.57583E-05	16	0.06464357	891	9.56938E-05
1	0.00678032	93	9.453E-06	9	0.0588369	811	8.20277E-05	17	0.0651272	898	9.64097E-05
2	0.00534058	74	7.446E-06	10	0.0552361	761	7.70077E-05	18	0.06112545	842	8.52184E-05
3	0.00588447	81	8.204E-06	11	0.0543814	750	7.58162E-05	19	0.05061289	698	7.05622E-05
4	0.01172375	162	1.634E-05	12	0.0566318	781	7.89535E-05	20	0.04048907	558	5.6448E-05
5	0.02882171	397	4.018E-05	13	0.0596478	822	8.31583E-05	21	0.03515422	485	4.90104E-05
6	0.04281568	590	5.969E-05	14	0.0648395	894	9.03964E-05	22	0.02663953	367	3.71396E-05
7	0.05387522	743	7.975E-05	15	0.0643708	887	8.97428E-05	23	0.01829687	252	2.55087E-05
									TOTAL	13,783	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - West Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	161	1.646E-05	8	0.0579319	862	9.38168E-05	16	0.06464357	961	0.000104686
1	0.00678032	101	1.034E-05	9	0.0588369	875	8.97357E-05	17	0.0651272	969	0.000105469
2	0.00534058	79	8.145E-06	10	0.0552361	821	8.42439E-05	18	0.06112545	909	9.32261E-05
3	0.00588447	88	8.975E-06	11	0.0543814	809	8.29404E-05	19	0.05061289	753	7.71928E-05
4	0.01172375	174	1.788E-05	12	0.0566318	842	8.63725E-05	20	0.04048907	602	6.17523E-05
5	0.02882171	429	4.396E-05	13	0.0596478	887	9.09725E-05	21	0.03515422	523	5.36158E-05
6	0.04281568	637	6.53E-05	14	0.0648395	964	9.88907E-05	22	0.02663953	396	4.06296E-05
7	0.05387522	801	8.725E-05	15	0.0643708	957	9.81757E-05	23	0.01829687	272	2.79057E-05
									TOTAL	14,872	

PM2.5

2021 Hourly Traffic Volumes and PM2.5 Emisssions - East Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	183	0.000031	8	0.0579319	983	0.000179515	16	0.06464357	1097	0.000200312
1	0.00678032	115	1.979E-05	9	0.0588369	998	0.000171706	17	0.0651272	1105	0.000201811
2	0.00534058	91	1.559E-05	10	0.0552361	937	0.000161197	18	0.06112545	1037	0.000178385
3	0.00588447	100	1.717E-05	11	0.0543814	923	0.000158703	19	0.05061289	859	0.000147705
4	0.01172375	199	3.421E-05	12	0.0566318	961	0.000165271	20	0.04048907	687	0.000118161
5	0.02882171	489	8.411E-05	13	0.0596478	1012	0.000174072	21	0.03515422	597	0.000102592
6	0.04281568	727	0.000125	14	0.0648395	1100	0.000189224	22	0.02663953	452	7.77431E-05
7	0.05387522	914	0.0001669	15	0.0643708	1092	0.000187856	23	0.01829687	310	5.33964E-05
								TOTAL		16,970	

2021 Hourly Traffic Volumes and PM2.5 Emisssions - East Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	183	3.145E-05	8	0.0579319	983	0.000179214	16	0.06464357	1097	0.000199977
1	0.00678032	115	1.975E-05	9	0.0588369	998	0.000171418	17	0.0651272	1105	0.000201473
2	0.00534058	91	1.556E-05	10	0.0552361	937	0.000160927	18	0.06112545	1037	0.000178086
3	0.00588447	100	1.714E-05	11	0.0543814	923	0.000158437	19	0.05061289	859	0.000147458
4	0.01172375	199	3.416E-05	12	0.0566318	961	0.000164994	20	0.04048907	687	0.000117963
5	0.02882171	489	8.397E-05	13	0.0596478	1012	0.000173781	21	0.03515422	597	0.00010242
6	0.04281568	727	0.0001247	14	0.0648395	1100	0.000188906	22	0.02663953	452	7.76128E-05
7	0.05387522	914	0.0001667	15	0.0643708	1092	0.000187541	23	0.01829687	310	5.33069E-05
								TOTAL		16,970	

TOG Ex

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi Northtbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	55	0.000099	8	0.0579319	297	0.000605534	16	0.06464357	332	0.000675687
1	0.00678032	35	6.19E-05	9	0.0588369	302	0.000537155	17	0.0651272	334	0.000680742
2	0.00534058	27	4.876E-05	10	0.0552361	284	0.000504281	18	0.06112545	314	0.000558048
3	0.00588447	30	5.372E-05	11	0.0543814	279	0.000496479	19	0.05061289	260	0.000462073
4	0.01172375	60	0.000107	12	0.0566318	291	0.000517023	20	0.04048907	208	0.000369647
5	0.02882171	148	0.0002631	13	0.0596478	306	0.000544558	21	0.03515422	181	0.000320943
6	0.04281568	220	0.0003909	14	0.0648395	333	0.000591956	22	0.02663953	137	0.000243207
7	0.05387522	277	0.0005631	15	0.0643708	331	0.000587677	23	0.01829687	94	0.000167042
									TOTAL	5,135	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi Southbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	77	0.0001363	8	0.0579319	412	0.000837638	16	0.06464357	460	0.000934682
1	0.00678032	48	8.563E-05	9	0.0588369	419	0.000743049	17	0.0651272	464	0.000941675
2	0.00534058	38	6.745E-05	10	0.0552361	393	0.000697575	18	0.06112545	435	0.000771951
3	0.00588447	42	7.431E-05	11	0.0543814	387	0.000686782	19	0.05061289	360	0.000639188
4	0.01172375	83	0.0001481	12	0.0566318	403	0.000715201	20	0.04048907	288	0.000511335
5	0.02882171	205	0.000364	13	0.0596478	425	0.00075329	21	0.03515422	250	0.000443961
6	0.04281568	305	0.0005407	14	0.0648395	462	0.000818856	22	0.02663953	190	0.00033643
7	0.05387522	384	0.000779	15	0.0643708	458	0.000812936	23	0.01829687	130	0.000231071
									TOTAL	7,120	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi Northtbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	95	0.000255	8	0.0579319	508	0.001640032	16	0.06464357	566	0.001830037
1	0.00678032	59	0.00016	9	0.0588369	516	0.001388516	17	0.0651272	571	0.001843729
2	0.00534058	47	0.000126	10	0.0552361	484	0.001303539	18	0.06112545	536	0.001442525
3	0.00588447	52	0.0001389	11	0.0543814	477	0.00128337	19	0.05061289	444	0.001194435
4	0.01172375	103	0.0002767	12	0.0566318	496	0.001336477	20	0.04048907	355	0.000955519
5	0.02882171	253	0.0006802	13	0.0596478	523	0.001407654	21	0.03515422	308	0.000829619
6	0.04281568	375	0.0010104	14	0.0648395	568	0.001530175	22	0.02663953	233	0.000628677
7	0.05387522	472	0.0015252	15	0.0643708	564	0.001519112	23	0.01829687	160	0.000431795
									TOTAL	8,763	

TOG Ex

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi Southbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	104	0.0002788	8	0.0579319	559	0.001795076	16	0.06464357	624	0.002003043
1	0.00678032	65	0.0001751	9	0.0588369	568	0.001519782	17	0.0651272	628	0.002018029
2	0.00534058	52	0.0001379	10	0.0552361	533	0.001426771	18	0.06112545	590	0.001578897
3	0.00588447	57	0.000152	11	0.0543814	525	0.001404696	19	0.05061289	488	0.001307353
4	0.01172375	113	0.0003028	12	0.0566318	546	0.001462823	20	0.04048907	391	0.00104585
5	0.02882171	278	0.0007445	13	0.0596478	575	0.001540729	21	0.03515422	339	0.000908049
6	0.04281568	413	0.0011059	14	0.0648395	625	0.001674833	22	0.02663953	257	0.00068811
7	0.05387522	520	0.0016694	15	0.0643708	621	0.001662724	23	0.01829687	177	0.000472616
									TOTAL	9,647	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi West Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	149	0.000225	8	0.0579319	798	0.001382659	16	0.06464357	891	0.001542846
1	0.00678032	93	0.0001413	9	0.0588369	811	0.001226525	17	0.0651272	898	0.001554389
2	0.00534058	74	0.0001113	10	0.0552361	761	0.001151462	18	0.06112545	842	0.001274233
3	0.00588447	81	0.0001227	11	0.0543814	750	0.001133646	19	0.05061289	698	0.001055086
4	0.01172375	162	0.0002444	12	0.0566318	781	0.001180557	20	0.04048907	558	0.000844043
5	0.02882171	397	0.0006008	13	0.0596478	822	0.00124343	21	0.03515422	485	0.000732832
6	0.04281568	590	0.0008925	14	0.0648395	894	0.001351657	22	0.02663953	367	0.000555333
7	0.05387522	743	0.0012858	15	0.0643708	887	0.001341885	23	0.01829687	252	0.00038142
									TOTAL	13,783	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi West Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	161	8.605E-06	8	0.0579319	862	4.48763E-05	16	0.06464357	961	5.00754E-05
1	0.00678032	101	5.406E-06	9	0.0588369	875	4.69102E-05	17	0.0651272	969	5.045E-05
2	0.00534058	79	4.258E-06	10	0.0552361	821	4.40393E-05	18	0.06112545	909	4.87349E-05
3	0.00588447	88	4.692E-06	11	0.0543814	809	4.33579E-05	19	0.05061289	753	4.03533E-05
4	0.01172375	174	9.347E-06	12	0.0566318	842	4.51521E-05	20	0.04048907	602	3.22816E-05
5	0.02882171	429	2.298E-05	13	0.0596478	887	4.75568E-05	21	0.03515422	523	2.80282E-05
6	0.04281568	637	3.414E-05	14	0.0648395	964	5.16961E-05	22	0.02663953	396	2.12395E-05
7	0.05387522	801	4.173E-05	15	0.0643708	957	5.13223E-05	23	0.01829687	272	1.4588E-05
									TOTAL	14,872	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi East Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	183	0.000016	8	0.0579319	983	8.5869E-05	16	0.06464357	1097	9.58173E-05
1	0.00678032	115	1.034E-05	9	0.0588369	998	8.97609E-05	17	0.0651272	1105	9.65342E-05
2	0.00534058	91	8.148E-06	10	0.0552361	937	8.42676E-05	18	0.06112545	1037	9.32523E-05
3	0.00588447	100	8.977E-06	11	0.0543814	923	8.29638E-05	19	0.05061289	859	7.72145E-05
4	0.01172375	199	1.789E-05	12	0.0566318	961	8.63968E-05	20	0.04048907	687	6.17697E-05
5	0.02882171	489	4.397E-05	13	0.0596478	1012	9.09981E-05	21	0.03515422	597	5.36309E-05
6	0.04281568	727	6.532E-05	14	0.0648395	1100	9.89185E-05	22	0.02663953	452	4.0641E-05
7	0.05387522	914	7.986E-05	15	0.0643708	1092	9.82033E-05	23	0.01829687	310	2.79135E-05
									TOTAL	16,970	

2021 Hourly Traffic Volumes and TOG Exhaust Emisssi East Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	183	1.644E-05	8	0.0579319	983	8.57251E-05	16	0.06464357	1097	9.56568E-05
1	0.00678032	115	1.033E-05	9	0.0588369	998	8.96105E-05	17	0.0651272	1105	9.63724E-05
2	0.00534058	91	8.134E-06	10	0.0552361	937	8.41263E-05	18	0.06112545	1037	9.30961E-05
3	0.00588447	100	8.962E-06	11	0.0543814	923	8.28247E-05	19	0.05061289	859	7.70851E-05
4	0.01172375	199	1.786E-05	12	0.0566318	961	8.6252E-05	20	0.04048907	687	6.16662E-05
5	0.02882171	489	4.39E-05	13	0.0596478	1012	9.08456E-05	21	0.03515422	597	5.3541E-05
6	0.04281568	727	6.521E-05	14	0.0648395	1100	9.87527E-05	22	0.02663953	452	4.05729E-05
7	0.05387522	914	7.972E-05	15	0.0643708	1092	9.80388E-05	23	0.01829687	310	2.78667E-05
									TOTAL	16,970	

2021 Hourly Traffic Volumes and TOG Evaporative Em Northtbound Flickinger Ave.

Hour	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332		55	0.000113
1	0.00678032		35	7.109E-05
2	0.00534058		27	5.6E-05
3	0.00588447		30	6.17E-05
4	0.01172375		60	0.0001229
5	0.02882171		148	0.0003022
6	0.04281568		220	0.0004489
7	0.05387522		277	0.0006456
8	0.0579319		297	0.000694195
9	0.0588369		302	0.000616909
10	0.0552361		284	0.000579154
11	0.0543814		279	0.000570194
12	0.0566318		291	0.000593788
13	0.0596478		306	0.000625412
14	0.0648395		333	0.000679847
15	0.0643708		331	0.000674932
16	0.06464357		332	0.00077462
17	0.0651272		334	0.000780415
18	0.06112545		314	0.000640905
19	0.05061289		260	0.00053068
20	0.04048907		208	0.000424531
21	0.03515422		181	0.000368595
22	0.02663953		137	0.000279317
23	0.01829687		94	0.000191844
		TOTAL	5,135	

2021 Hourly Traffic Volumes and TOG Evaporative Em Southbound Flickinger Ave.

Hour	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332		77	0.0001565
1	0.00678032		48	9.834E-05
2	0.00534058		38	7.746E-05
3	0.00588447		42	8.535E-05
4	0.01172375		83	0.00017
5	0.02882171		205	0.000418
6	0.04281568		305	0.000621
7	0.05387522		384	0.000893
8	0.0579319		412	0.000960283
9	0.0588369		419	0.000853373
10	0.0552361		393	0.000801147
11	0.0543814		387	0.000788752
12	0.0566318		403	0.00082139
13	0.0596478		425	0.000865135
14	0.0648395		462	0.000940436
15	0.0643708		458	0.000933637
16	0.06464357		460	0.001071536
17	0.0651272		464	0.001079553
18	0.06112545		435	0.000886567
19	0.05061289		360	0.000734092
20	0.04048907		288	0.000587256
21	0.03515422		250	0.000509879
22	0.02663953		190	0.000386381
23	0.01829687		130	0.000265379
		TOTAL	7,120	

2021 Hourly Traffic Volumes and TOG Evaporative Em Northtbound Jackson Ave.

Hour	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332		95	0.000292
1	0.00678032		59	0.0001834
2	0.00534058		47	0.0001445
3	0.00588447		52	0.0001592
4	0.01172375		103	0.0003172
5	0.02882171		253	0.0007798
6	0.04281568		375	0.0011584
7	0.05387522		472	0.0017005
8	0.0579319		508	0.001828559
9	0.0588369		516	0.00159182
10	0.0552361		484	0.001494401
11	0.0543814		477	0.001471279
12	0.0566318		496	0.001532161
13	0.0596478		523	0.00161376
14	0.0648395		568	0.00175422
15	0.0643708		564	0.001741538
16	0.06464357		566	0.002040405
17	0.0651272		571	0.00205567
18	0.06112545		536	0.001653737
19	0.05061289		444	0.001369322
20	0.04048907		355	0.001095424
21	0.03515422		308	0.00095109
22	0.02663953		233	0.000720727
23	0.01829687		160	0.000495018
		TOTAL	8,763	

2021 Hourly Traffic Volumes and TOG Evaporative Em Southbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	104	0.0003196	8	0.0579319	559	0.002001425	16	0.06464357	624	0.002233299
1	0.00678032	65	0.0002008	9	0.0588369	568	0.001742305	17	0.0651272	628	0.002250007
2	0.00534058	52	0.0001581	10	0.0552361	533	0.001635677	18	0.06112545	590	0.001810076
3	0.00588447	57	0.0001743	11	0.0543814	525	0.001610369	19	0.05061289	488	0.001498773
4	0.01172375	113	0.0003472	12	0.0566318	546	0.001677007	20	0.04048907	391	0.001198982
5	0.02882171	278	0.0008535	13	0.0596478	575	0.001766319	21	0.03515422	339	0.001041003
6	0.04281568	413	0.0012679	14	0.0648395	625	0.001920059	22	0.02663953	257	0.000788862
7	0.05387522	520	0.0018613	15	0.0643708	621	0.001906177	23	0.01829687	177	0.000541816
									TOTAL	9,647	

2021 Hourly Traffic Volumes and TOG Evaporative Em West Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	149	0.000258	8	0.0579319	798	0.001585106	16	0.06464357	891	0.001768747
1	0.00678032	93	0.0001623	9	0.0588369	811	0.001408634	17	0.0651272	898	0.00178198
2	0.00534058	74	0.0001279	10	0.0552361	761	0.001322426	18	0.06112545	842	0.001463425
3	0.00588447	81	0.0001409	11	0.0543814	750	0.001301965	19	0.05061289	698	0.00121174
4	0.01172375	162	0.0002807	12	0.0566318	781	0.00135584	20	0.04048907	558	0.000969363
5	0.02882171	397	0.00069	13	0.0596478	822	0.001428049	21	0.03515422	485	0.000841639
6	0.04281568	590	0.0010251	14	0.0648395	894	0.001552345	22	0.02663953	367	0.000637786
7	0.05387522	743	0.0014741	15	0.0643708	887	0.001541122	23	0.01829687	252	0.000438052
									TOTAL	13,783	

2021 Hourly Traffic Volumes and TOG Evaporative Em West Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	161	0.0002827	8	0.0579319	862	0.001734054	16	0.06464357	961	0.001934952
1	0.00678032	101	0.0001776	9	0.0588369	875	0.001541	17	0.0651272	969	0.001949428
2	0.00534058	79	0.0001399	10	0.0552361	821	0.001446691	18	0.06112545	909	0.00160094
3	0.00588447	88	0.0001541	11	0.0543814	809	0.001424307	19	0.05061289	753	0.001325605
4	0.01172375	174	0.0003071	12	0.0566318	842	0.001483245	20	0.04048907	602	0.001060451
5	0.02882171	429	0.0007549	13	0.0596478	887	0.001562239	21	0.03515422	523	0.000920726
6	0.04281568	637	0.0011214	14	0.0648395	964	0.001698215	22	0.02663953	396	0.000697717
7	0.05387522	801	0.0016126	15	0.0643708	957	0.001685938	23	0.01829687	272	0.000479214
									TOTAL	14,872	

2021 Hourly Traffic Volumes and TOG Evaporative Em East Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	183	0.000541	8	0.0579319	983	0.003318046	16	0.06464357	1097	0.003702457
1	0.00678032	115	0.0003398	9	0.0588369	998	0.002948644	17	0.0651272	1105	0.003730156
2	0.00534058	91	0.0002676	10	0.0552361	937	0.002768187	18	0.06112545	1037	0.003063337
3	0.00588447	100	0.0002949	11	0.0543814	923	0.002725357	19	0.05061289	859	0.002536494
4	0.01172375	199	0.0005875	12	0.0566318	961	0.002838133	20	0.04048907	687	0.002029133
5	0.02882171	489	0.0014444	13	0.0596478	1012	0.002989284	21	0.03515422	597	0.001761774
6	0.04281568	727	0.0021457	14	0.0648395	1100	0.00324947	22	0.02663953	452	0.001335055
7	0.05387522	914	0.0030857	15	0.0643708	1092	0.003225977	23	0.01829687	310	0.000916958
									TOTAL	16,970	

2021 Hourly Traffic Volumes and TOG Evaporative Em East Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	183	0.00054	8	0.0579319	983	0.003312486	16	0.06464357	1097	0.003696252
1	0.00678032	115	0.0003392	9	0.0588369	998	0.002943702	17	0.0651272	1105	0.003723905
2	0.00534058	91	0.0002672	10	0.0552361	937	0.002763548	18	0.06112545	1037	0.003058203
3	0.00588447	100	0.0002944	11	0.0543814	923	0.00272079	19	0.05061289	859	0.002532243
4	0.01172375	199	0.0005866	12	0.0566318	961	0.002833377	20	0.04048907	687	0.002025733
5	0.02882171	489	0.001442	13	0.0596478	1012	0.002984275	21	0.03515422	597	0.001758822
6	0.04281568	727	0.0021421	14	0.0648395	1100	0.003244024	22	0.02663953	452	0.001332818
7	0.05387522	914	0.0030805	15	0.0643708	1092	0.003220571	23	0.01829687	310	0.000915421
									TOTAL	16,970	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss Northtbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	55	0.000114	8	0.0579319	297	0.000614228	16	0.06464357	332	0.000685389
1	0.00678032	35	7.189E-05	9	0.0588369	302	0.000623823	17	0.0651272	334	0.000690517
2	0.00534058	27	5.662E-05	10	0.0552361	284	0.000585645	18	0.06112545	314	0.000648088
3	0.00588447	30	6.239E-05	11	0.0543814	279	0.000576584	19	0.05061289	260	0.000536628
4	0.01172375	60	0.0001243	12	0.0566318	291	0.000600443	20	0.04048907	208	0.000429289
5	0.02882171	148	0.0003056	13	0.0596478	306	0.000632421	21	0.03515422	181	0.000372726
6	0.04281568	220	0.000454	14	0.0648395	333	0.000687467	22	0.02663953	137	0.000282448
7	0.05387522	277	0.0005712	15	0.0643708	331	0.000682497	23	0.01829687	94	0.000193994
									TOTAL	5,135	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss Southbound Flickinger Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	77	0.0001583	8	0.0579319	412	0.000849665	16	0.06464357	460	0.000948102
1	0.00678032	48	9.944E-05	9	0.0588369	419	0.000862938	17	0.0651272	464	0.000955196
2	0.00534058	38	7.833E-05	10	0.0552361	393	0.000810126	18	0.06112545	435	0.000896503
3	0.00588447	42	8.631E-05	11	0.0543814	387	0.000797592	19	0.05061289	360	0.00074232
4	0.01172375	83	0.0001719	12	0.0566318	403	0.000830596	20	0.04048907	288	0.000593838
5	0.02882171	205	0.0004227	13	0.0596478	425	0.000874832	21	0.03515422	250	0.000515593
6	0.04281568	305	0.000628	14	0.0648395	462	0.000950976	22	0.02663953	190	0.000390712
7	0.05387522	384	0.0007902	15	0.0643708	458	0.000944101	23	0.01829687	130	0.000268353
									TOTAL	7,120	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss Northtbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	95	0.000258	8	0.0579319	508	0.00138679	16	0.06464357	566	0.001547455
1	0.00678032	59	0.0001623	9	0.0588369	516	0.001408453	17	0.0651272	571	0.001559032
2	0.00534058	47	0.0001278	10	0.0552361	484	0.001322256	18	0.06112545	536	0.001463237
3	0.00588447	52	0.0001409	11	0.0543814	477	0.001301798	19	0.05061289	444	0.001211585
4	0.01172375	103	0.0002806	12	0.0566318	496	0.001355666	20	0.04048907	355	0.000969238
5	0.02882171	253	0.0006899	13	0.0596478	523	0.001427865	21	0.03515422	308	0.000841531
6	0.04281568	375	0.0010249	14	0.0648395	568	0.001552146	22	0.02663953	233	0.000637704
7	0.05387522	472	0.0012897	15	0.0643708	564	0.001540924	23	0.01829687	160	0.000437995
									TOTAL	8,763	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss Southbound Jackson Ave.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	104	0.0002828	8	0.0579319	559	0.001517892	16	0.06464357	624	0.001693747
1	0.00678032	65	0.0001777	9	0.0588369	568	0.001541603	17	0.0651272	628	0.001706418
2	0.00534058	52	0.0001399	10	0.0552361	533	0.001447258	18	0.06112545	590	0.001601567
3	0.00588447	57	0.0001542	11	0.0543814	525	0.001424865	19	0.05061289	488	0.001326124
4	0.01172375	113	0.0003072	12	0.0566318	546	0.001483827	20	0.04048907	391	0.001060867
5	0.02882171	278	0.0007552	13	0.0596478	575	0.001562851	21	0.03515422	339	0.000921087
6	0.04281568	413	0.0011218	14	0.0648395	625	0.001698881	22	0.02663953	257	0.000697991
7	0.05387522	520	0.0014116	15	0.0643708	621	0.001686598	23	0.01829687	177	0.000479402
									TOTAL	9,647	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss West Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	149	0.000261	8	0.0579319	798	0.001402512	16	0.06464357	891	0.001564999
1	0.00678032	93	0.0001641	9	0.0588369	811	0.001424421	17	0.0651272	898	0.001576708
2	0.00534058	74	0.0001293	10	0.0552361	761	0.001337247	18	0.06112545	842	0.001479827
3	0.00588447	81	0.0001425	11	0.0543814	750	0.001316557	19	0.05061289	698	0.001225321
4	0.01172375	162	0.0002838	12	0.0566318	781	0.001371036	20	0.04048907	558	0.000980227
5	0.02882171	397	0.0006978	13	0.0596478	822	0.001444054	21	0.03515422	485	0.000851072
6	0.04281568	590	0.0010366	14	0.0648395	894	0.001569743	22	0.02663953	367	0.000644934
7	0.05387522	743	0.0013043	15	0.0643708	887	0.001558395	23	0.01829687	252	0.000442961
									TOTAL	13,783	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss West Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	161	0.0002859	8	0.0579319	862	0.001534303	16	0.06464357	961	0.001712059
1	0.00678032	101	0.0001796	9	0.0588369	875	0.001558271	17	0.0651272	969	0.001724867
2	0.00534058	79	0.0001414	10	0.0552361	821	0.001462905	18	0.06112545	909	0.001618882
3	0.00588447	88	0.0001558	11	0.0543814	809	0.00144027	19	0.05061289	753	0.001340462
4	0.01172375	174	0.0003105	12	0.0566318	842	0.001499869	20	0.04048907	602	0.001072337
5	0.02882171	429	0.0007633	13	0.0596478	887	0.001579748	21	0.03515422	523	0.000931045
6	0.04281568	637	0.001134	14	0.0648395	964	0.001717248	22	0.02663953	396	0.000705537
7	0.05387522	801	0.0014269	15	0.0643708	957	0.001704833	23	0.01829687	272	0.000484585
									TOTAL	14,872	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss East Leg, Eastbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	183	0.000547	8	0.0579319	983	0.00293583	16	0.06464357	1097	0.003275958
1	0.00678032	115	0.0003436	9	0.0588369	998	0.002981691	17	0.0651272	1105	0.003300467
2	0.00534058	91	0.0002706	10	0.0552361	937	0.002799212	18	0.06112545	1037	0.00309767
3	0.00588447	100	0.0002982	11	0.0543814	923	0.002755902	19	0.05061289	859	0.002564922
4	0.01172375	199	0.0005941	12	0.0566318	961	0.002869942	20	0.04048907	687	0.002051875
5	0.02882171	489	0.0014606	13	0.0596478	1012	0.003022787	21	0.03515422	597	0.001781519
6	0.04281568	727	0.0021698	14	0.0648395	1100	0.003285889	22	0.02663953	452	0.001350018
7	0.05387522	914	0.0027302	15	0.0643708	1092	0.003262133	23	0.01829687	310	0.000927235
								TOTAL		16,970	

2021 Hourly Traffic Volumes and Fugitive PM2.5 Emiss East Leg, Westbound Berryessa Rd.

Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s	Hour	Fraction Per Hour	VPH	g/s
0	0.01079332	183	0.0005461	8	0.0579319	983	0.00293091	16	0.06464357	1097	0.003270469
1	0.00678032	115	0.000343	9	0.0588369	998	0.002976694	17	0.0651272	1105	0.003294936
2	0.00534058	91	0.0002702	10	0.0552361	937	0.002794521	18	0.06112545	1037	0.003092479
3	0.00588447	100	0.0002977	11	0.0543814	923	0.002751284	19	0.05061289	859	0.002560624
4	0.01172375	199	0.0005931	12	0.0566318	961	0.002865133	20	0.04048907	687	0.002048436
5	0.02882171	489	0.0014582	13	0.0596478	1012	0.003017722	21	0.03515422	597	0.001778534
6	0.04281568	727	0.0021661	14	0.0648395	1100	0.003280382	22	0.02663953	452	0.001347756
7	0.05387522	914	0.0027257	15	0.0643708	1092	0.003256666	23	0.01829687	310	0.000925681
								TOTAL		16,970	

Berryessa Jackson Retail Development, San Jose, CA
AERMOD Risk Modeling Parameters and Maximum Concentrations at Construction MEI Receptor

Emissions Years	2021 and 2022
Receptor Information	
Number of Receptors	
Receptor Height (in m) =	4.55
Receptor Distances =	Construction MEI Location
Meteorological Conditions	
BAAQMD San Jose Airport Met Data	2013 - 2017
Land Use Classification	urban
Wind Speed =	variable
Wind Direction =	variable

Berryessa Rd. Construction MEI Maximum Concentrations 2021 - Floor 2

Meteorological Data Years	2021 Concentrations (µg/m^3)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00863	0.01721	0.21023

Meteorological Data Years	2021 PM2.5 Concentrations (µg/m^3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.18654	0.17181	0.01473

Berryessa Rd. Construction MEI Maximum Concentrations 2022 -Floor 2

Meteorological Data Years	2022 Concentrations (µg/m^3)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00521	0.01233	0.18465

Meteorological Data Years	2022 PM2.5 Concentrations (µg/m^3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.19209	0.18151	0.01058

Berryessa Jackson Retail Development, San Jose, CA - Berryessa Road Impacts
Maximum DPM Cancer Risk and PM2.5 Calculations From Berryessa on Construction MEI
Impacts at Off-Site MF Home - 4.55 meter receptor height

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2021	10	0.0086	0.0172	0.2102	0.117	0.001	0.0010	0.12
1	1	0 - 1	2021	10	0.0086	0.0172	0.2102	1.417	0.016	0.0116	1.45
2	1	1 - 2	2022	10	0.0052	0.0123	0.1847	0.856	0.012	0.0102	0.88
3	1	2 - 3	2023	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
4	1	3 - 4	2024	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
5	1	4 - 5	2025	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
6	1	5 - 6	2026	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
7	1	6 - 7	2027	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
8	1	7 - 8	2028	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
9	1	8 - 9	2029	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
10	1	9 - 10	2030	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
11	1	10 - 11	2031	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
12	1	11 - 12	2032	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
13	1	12 - 13	2033	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
14	1	13 - 14	2034	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
15	1	14 - 15	2035	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
16	1	15 - 16	2036	3	0.0052	0.0123	0.1847	0.135	0.002	0.0016	0.14
17	1	16-17	2037	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
18	1	17-18	2038	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
19	1	18-19	2039	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
20	1	19-20	2040	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
21	1	20-21	2041	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
22	1	21-22	2042	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
23	1	22-23	2043	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
24	1	23-24	2044	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
25	1	24-25	2045	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
26	1	25-26	2046	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
27	1	26-27	2047	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
28	1	27-28	2048	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
29	1	28-29	2049	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
30	1	29-30	2050	1	0.0052	0.0123	0.1847	0.015	0.000	0.0002	0.015
Total Increased Cancer Risk								4.49	0.057	0.048	**4.6**

Maximum Hazard Index	Maximum Total PM2.5 (µg/m3)
0.0017	0.187
0.0017	0.192

* Third trimester of pregnancy

Berryessa Jackson Retail Development, San Jose, CA
AERMOD Risk Modeling Parameters and Maximum Concentrations at Construction MEI Receptor

Emissions Years	2021 and 2022
Receptor Information	
Number of Receptors	
Receptor Height (in m) =	4.55
Receptor Distances =	Construction MEI Location
Meteorological Conditions	
BAAQMD San Jose Airport Met Data	2013 - 2017
Land Use Classification	urban
Wind Speed =	variable
Wind Direction =	variable

Flickinger Ave. Construction MEI Maximum Concentrations 2021 - Floor 2

Meteorological Data Years	2021 Concentrations (µg/m^3)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00155	0.03634	0.03791

Meteorological Data Years	2021 PM2.5 Concentrations (µg/m^3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.03356	0.03091	0.00265

Flickinger Ave. Construction MEI Maximum Concentrations 2022 -Floor 2

Meteorological Data Years	2022 Concentrations (µg/m^3)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.0009	0.0277	0.0318

Meteorological Data Years	2022 PM2.5 Concentrations (µg/m^3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.03302	0.0312	0.00182

Berryessa Jackson Retail Development, San Jose, CA -Flickinger Ave. Impacts
Maximum DPM Cancer Risk and PM2.5 Calculations for Construction MEI
Impacts at Off-Site MF Home - 4.55 meter receptor height

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2021	10	0.0016	0.0363	0.0379	0.021	0.003	0.0002	0.02
1	1	0 - 1	2021	10	0.0016	0.0363	0.0379	0.255	0.034	0.0021	0.29
2	1	1 - 2	2022	10	0.0009	0.0277	0.0318	0.148	0.026	0.0018	0.18
3	1	2 - 3	2023	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
4	1	3 - 4	2024	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
5	1	4 - 5	2025	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
6	1	5 - 6	2026	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
7	1	6 - 7	2027	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
8	1	7 - 8	2028	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
9	1	8 - 9	2029	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
10	1	9 - 10	2030	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
11	1	10 - 11	2031	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
12	1	11 - 12	2032	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
13	1	12 - 13	2033	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
14	1	13 - 14	2034	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
15	1	14 - 15	2035	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
16	1	15 - 16	2036	3	0.0009	0.0277	0.0318	0.023	0.004	0.0003	0.03
17	1	16-17	2037	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
18	1	17-18	2038	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
19	1	18-19	2039	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
20	1	19-20	2040	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
21	1	20-21	2041	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
22	1	21-22	2042	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
23	1	22-23	2043	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
24	1	23-24	2044	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
25	1	24-25	2045	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
26	1	25-26	2046	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
27	1	26-27	2047	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
28	1	27-28	2048	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
29	1	28-29	2049	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
30	1	29-30	2050	1	0.0009	0.0277	0.0318	0.003	0.000	0.0000	0.003
Total Increased Cancer Risk								0.79	0.126	0.008	**0.9**

Maximum	
Hazard Index	**Total PM2.5 (µg/m3)**
0.0003	0.034
0.0003	0.033

* Third trimester of pregnancy

Berryessa Jackson Retail Development, San Jose, CA
AERMOD Risk Modeling Parameters and Maximum Concentrations at Construction MEI Receptor

Emissions Years	2021 and 2022
Receptor Information	
Number of Receptors	
Receptor Height (in m) =	4.55
Receptor Distances =	Construction MEI Location
Meteorological Conditions	
BAAQMD San Jose Airport Met Data	2013 - 2017
Land Use Classification	urban
Wind Speed =	variable
Wind Direction =	variable

Jackson Ave. Construction MEI Maximum Concentrations 2021 - Floor 2

Meteorological Data Years	2021 Concentrations (µg/m^3)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00334	0.06852	0.07214

Meteorological Data Years	2021 PM2.5 Concentrations (µg/m^3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.07313	0.06769	0.00544

Jackson Ave. Construction MEI Maximum Concentrations 2022 -Floor 2

Meteorological Data Years	2022 Concentrations (µg/m^3)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00198	0.07245	0.08253

Meteorological Data Years	2022 PM2.5 Concentrations (µg/m^3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.07508	0.07065	0.00443

Berryessa Jackson Retail Development, San Jose, CA - Jackson Ave. Impacts
Maximum DPM Cancer Risk and PM2.5 Calculations for Construction MEI
Impacts at Off-Site MF Home - 4.55 meter receptor height

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2021	10	0.0033	0.0685	0.0721	0.045	0.005	0.0003	0.05
1	1	0 - 1	2021	10	0.0033	0.0685	0.0721	0.549	0.064	0.0040	0.62
2	1	1 - 2	2022	10	0.0020	0.0725	0.0825	0.325	0.068	0.0046	0.40
3	1	2 - 3	2023	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
4	1	3 - 4	2024	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
5	1	4 - 5	2025	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
6	1	5 - 6	2026	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
7	1	6 - 7	2027	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
8	1	7 - 8	2028	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
9	1	8 - 9	2029	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
10	1	9 - 10	2030	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
11	1	10 - 11	2031	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
12	1	11 - 12	2032	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
13	1	12 - 13	2033	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
14	1	13 - 14	2034	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
15	1	14 - 15	2035	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
16	1	15 - 16	2036	3	0.0020	0.0725	0.0825	0.051	0.011	0.0007	0.06
17	1	16-17	2037	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
18	1	17-18	2038	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
19	1	18-19	2039	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
20	1	19-20	2040	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
21	1	20-21	2041	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
22	1	21-22	2042	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
23	1	22-23	2043	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
24	1	23-24	2044	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
25	1	24-25	2045	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
26	1	25-26	2046	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
27	1	26-27	2047	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
28	1	27-28	2048	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
29	1	28-29	2049	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
30	1	29-30	2050	1	0.0020	0.0725	0.0825	0.006	0.001	0.0001	0.007
Total Increased Cancer Risk								1.72	0.304	0.020	**2.0**

Maximum	
Hazard Index	**Total PM2.5 (µg/m3)**
0.0007	0.073
0.0007	0.075

* Third trimester of pregnancy

Attachment 6: 2030 GHGRS Development Compliance Checklist

DEPARTMENT OF PLANNING, BUILDING AND CODE ENFORCEMENT

Purpose of the Compliance Checklist

In 2020, the City adopted a Greenhouse Gas Reduction Strategy (GHGRS) that outlines the actions the City will undertake to achieve its proportional share of State greenhouse gas (GHG) emission reductions for the interim target year 2030. The purpose of the Greenhouse Gas Reduction Strategy Compliance Checklist (Checklist) is to:

- Implement GHG reduction strategies from the 2030 GHGRS to new development projects.
- Provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to the California Environmental Quality Act (CEQA).

The 2030 GHGRS presents the City's comprehensive path to reduce GHG emissions to achieve the 2030 reduction target, based on SB 32, BAAQMD, and OPR. Additionally, the 2030 GHGRS leverages other important City plans and policies; including the General Plan, Climate Smart San José, and the City Municipal Code in identifying reductions strategies that achieve the City's target. CEQA Guidelines Section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of greenhouse gases. Accordingly, the City of San José's 2030 GHGRS represents San José's qualified climate action plan in compliance with CEQA.

As described in the 2030 GHGRS, these GHG reductions will occur through a combination of City initiatives in various plans and policies and will provide reductions from both existing and new developments. This Compliance Checklist specifically applies to proposed discretionary projects that require environmental review pursuant to CEQA. Therefore, the Checklist is a critical implementation tool in the City's overall strategy to reduce GHG emissions. Implementation of applicable reduction actions in new development projects will help the City achieve incremental reductions toward its target. Per the 2030 GHGRS, the City will monitor strategy implementation and make updates, as necessary, to maintain an appropriate trajectory to the 2030 GHG target.

Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the GHGRS.

Instructions for Compliance Checklist

Applicants shall complete the following sections to demonstrate conformance with the City of San José 2030 Greenhouse Gas Reduction Strategy for the proposed project. All projects must complete Section A. General Plan Policy Conformance and Section B. Greenhouse Gas Reduction Strategies. Projects that propose alternative GHG mitigation measures must also complete Section C. Alternative Project Measures and Additional GHG Reductions.

A. General Plan Policy Compliance

Projects need to demonstrate consistency with the Envision San José 2040 General Plan's relevant policies for Land Use & Design, Transportation, Green Building, and Water Conservation, enumerated in Table A. All applicants shall complete the following steps.

1. Complete Table A, Item #1 to demonstrate the project's consistency with the General Plan Land Use and Circulation Diagram.

2. Complete Table A, Items #2 through #4 to demonstrate the project's consistency with General Plan policies[1] related to green building; pedestrian, bicycle & transit site design; and water conservation and urban forestry, as applicable. For each policy listed, mark the relevant yes/no check boxes to indicate project consistency, and provide a qualitative description of how the policy is implemented in the proposed project or why the policy is not applicable to the proposed project. Qualitative descriptions can be included in Table A or provided as separate attachments. This explanation will provide the basis for analysis in the CEQA document.

B. Greenhouse Gas Reduction Strategies

Table B identifies the GHGRS strategies and recommended consistency options. Projects need to demonstrate consistency with the GHGRS reduction strategies listed in Table B or document why the strategies are not applicable or are infeasible. The corresponding GHGRS strategies are indicated in the table to provide additional context, with the full text of the strategies preceding Table B.

Residential projects must complete Table B, Part 1 and 2; Non-residential projects must complete Table B, Part 2 only. All applicants shall complete the following steps for Table B.

1. Review the project consistency options described in the column titled 'GHGRS Strategy and Consistency Options'.

2. Use the check boxes in the column titled "Project Conformance" to indicate if the strategy is 'Proposed', 'Not Applicable', 'Not Feasible', or if there is an 'Alternative Measure Proposed'.

[1] The lists in items # 2-4 do not represent all General Plan policies but allow projects to demonstrate consistency and achievement of policies that are related to quantified reduction estimates in the 2030 GHGRS.

3. Provide a qualitative analysis of the proposed project's compliance with the GHGRS strategies in the column titled "Description of Project Measure". This will be the basis for CEQA analysis to demonstrate compliance with the 2030 GHGRS and by extension, with SB 32. The qualitative analysis should provide:

    a. A description of which consistency options are included as part of the proposed project, or

    b. A description of why the strategy is not applicable to the proposed project, or

    c. A description of why the consistency options are infeasible. If applicants select 'Not Feasible' or 'Alternative Measure Proposed', they must complete Table C to document what alternative project measures will be implemented to achieve a similar level of greenhouse gas reduction and how those reduction estimates were calculated.

C. Alternative Project Measures and Additional GHG Reductions

Projects that propose alternative GHG mitigation measures to those identified in Table B or propose to include additional GHG mitigation measures beyond those described in Tables A and B, shall provide a summary explanation of the proposed measures and demonstrate efficiency or greenhouse gas reductions achievable though the proposed measures. Documentation for these alternative or additional project measures shall be documented in Table C. Any applicants who select 'Not Feasible' or 'Alternative Measure Proposed' in Table B must complete the following steps for Table C.

1. In the column titled "Description of Proposed Measure" provide a qualitative description of what measure will be implemented, why it is proposed, and how it will reduce GHG emissions.

2. In the column titled "Description of GHG Reduction Estimate" demonstrate how the alternative project measure would achieve the same or greater level of greenhouse gas reductions as the GHGRS strategy it replaces. Documentation or calculation files can be attached separately.

3. In the column titled "Proposed Measure Implementation" identify how the measure will be implemented: incorporated as part of the project design or as an additional measure that is not part of the project (e.g., purchase of carbon offsets).

Compliance Checklist

Evaluation of Project Conformance with the 2030 Greenhouse Gas Reduction Strategy

Table A: General Plan Consistency

Development Type: ☒ Commercial ☐ Residential ☐ Office ☐ Other: Specify

1) Consistency with the Land Use/Transportation Diagram (Land Use and Density)	Yes	No
Is the proposed Project consistent with the Land Use/Transportation Diagram?	☒	☐
If not, and the proposed project includes a General Plan Amendment, does the proposed amendment decrease GHG emissions (in absolute terms or per capita, per employee, per service population) below the level assumed in the GHGRS based on the existing planned land use? (The project could have a higher density, mix of uses, or other features that would reduce GHG emissions compared to the planned land use).[2]	☐	☐
If not, would the proposed project and the General Plan Amendment increase GHG emissions (in absolute terms or per capita, per employee, per service population)? Project is not consistent with GHGRS and further modeling will be required to determine if additional mitigation measures are necessary.	☐	☐

Response documentation: *[Either here or as an attachment]*

[2] For example, a General Plan Amendment to change use from single-family residential to multi-family residential or a General Plan Amendment to change the use from regional-serving commercial to mixed-use urban in a transit-served area might reduce travel demand, and therefore GHG emissions from mobile sources.

2) Implementation of Green Building Measures	Yes	No
***MS-2.2**: Encourage maximized use of on-site generation of renewable energy for all new and existing buildings.*	☒	☐
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Project will install solar panels on roof		
***MS-2.3**: Encourage consideration of solar orientation, including building placement, landscaping, design and construction techniques for new construction to minimize energy consumption.*	☒	☐
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Buildings are placed far from existing buildings to maximize solar exposure. Also, buildings within the project will not cast shadow on one another so that the solar panels on the roof can be as effective as possible		
***MS-2.7**: Encourage the installation of solar panels or other clean energy power generation sources over parking areas.*	☐	☐
Not applicable	☒	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] In commercial development, covered parking is not required		
***MS-2.11**: Require new development to incorporate green building practices, including those required by the Green Building Ordinance. Specifically, target reduced energy use through construction techniques (e.g., design of building envelopes and systems to maximize energy performance), through architectural design (e.g., design to maximize cross ventilation and interior daylight) and through site design techniques (e.g., orienting buildings on sites to maximize the effectiveness of passive solar design).*	☒	☐
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Commercial units inside each building has cross ventilation. Also, the buildings are placed in such a way that each building can get solar exposure during most times of the day		
***MS-16.2**: Promote neighborhood-based distributed clean/renewable energy generation to improve local energy security and to reduce the amount of energy wasted in transmitting electricity over long distances.*	☐	☐
Not applicable	☒	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] There is no neighborhood-based distributed clean energy at this site		

3) Pedestrian, Bicycle & Transit Site Design Measures	**Yes**	**No**
***CD-2.1**: Promote the Circulation Goals and Policies in the Envision San José 2040 General Plan. Create streets that promote pedestrian and bicycle transportation by following applicable goals and policies in the Circulation section of the Envision San José 2040 General Plan.*		
a) Design the street network for its safe shared use by pedestrians, bicyclists, and vehicles. Include elements that increase driver awareness.	☒	☐
b) Create a comfortable and safe pedestrian environment by implementing wider sidewalks, shade structures, attractive street furniture, street trees, reduced traffic speeds, pedestrian-oriented lighting, mid-block pedestrian crossings, pedestrian-activated crossing lights, bulb-outs and curb extensions at intersections, and on-street parking that buffers pedestrians from vehicles.	☒	☐
c) Consider support for reduced parking requirements, alternative parking arrangements, and Transportation Demand Management strategies to reduce area dedicated to parking and increase area dedicated to employment, housing, parks, public art, or other amenities. Encourage de-coupled parking to ensure that the value and cost of parking are considered in real estate and business transactions.	☒	☐
Not applicable	☐	☐

Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Project has long driveway at entry for car stacking, thus decreasing the stacking off site and improves traffic safety. Project provides bike racks to encourage use of bicycles. At street intersection and at pedestrian paseo, paving material will be varied to increase drivers' awareness. Widened sidewalks and outdoor seating areas also help to make the project pedestrian friendly and will slow down vehicular traffic

***CD-2.5**: Integrate Green Building Goals and Policies of the Envision San José 2040 General Plan into site design to create healthful environments. Consider factors such as shaded parking areas, pedestrian connections, minimization of impervious surfaces, incorporation of stormwater treatment measures, appropriate building orientations, etc.*	☒	☐
Not applicable	☐	☐

Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment]
Stormwater treatment has been incorporated throughout the site. Pedestrian connection has been established between this project and the neighboring townhouses

	Yes	No
***CD-2.11**: Within the Downtown and Urban Village Overlay areas, consistent with the minimum density requirements of the pertaining Land Use/Transportation Diagram designation, avoid the construction of surface parking lots except as an interim use, so that long-term development of the site will result in a cohesive urban form. In these areas, whenever possible, use structured parking, rather than surface parking, to fulfill parking requirements. Encourage the incorporation of alternative uses, such as parks, above parking structures.*	☐	☐
Not applicable	☒	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Project is not located in downtown or within an Urban Village		
***CD-3.2**: Prioritize pedestrian and bicycle connections to transit, community facilities (including schools), commercial areas, and other areas serving daily needs. Ensure that the design of new facilities can accommodate significant anticipated future increases in bicycle and pedestrian activity.*	☒	☐
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] This commercial project provides neighborhood retail needs to the townhouses directly adjacent. Pedestrian path has been set up for convenient access from townhouse development to the shops in this project.		
***CD-3.4**: Encourage pedestrian cross-access connections between adjacent properties and require pedestrian and bicycle connections to streets and other public spaces, with particular attention and priority given to providing convenient access to transit facilities. Provide pedestrian and vehicular connections with cross-access easements within and between new and existing developments to encourage walking and minimize interruptions by parking areas and curb cuts.*	☒	☐
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Project has pedestrian access connecting from townhouse development next door to this commercial center, then from this commercial center to Berryessa. There are bus stops right outside, to the northeast and to the southwest.		
***LU-3.5**: Balance the need for parking to support a thriving Downtown with the need to minimize the impacts of parking upon a vibrant pedestrian and transit oriented urban environment. Provide for the needs of bicyclists and pedestrians, including adequate bicycle parking areas and design measures to promote bicyclist and pedestrian safety.*	☐	☐
Not applicable	☒	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] This project is not within Downtown or near Downtown.		

	Yes	No
TR-2.8: *Require new development to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements.*	☒	☐
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Project provides bike racks conveniently located outside retail shops and restaurants.		
TR-7.1: *Require large employers to develop TDM programs to reduce the vehicle trips and vehicle miles generated by their employees through the use of shuttles, provision for car-sharing, bicycle sharing, carpool, parking strategies, transit incentives and other measures.*	☐	☐
Not applicable	☒	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Project is not using TDM measures to reduce parking requirement due to neighbor's concern. Neighbors want to make sure this commercial project has sufficient parking so as to minimize overflow parking into their residential neighborhood		
TR-8.5: *Promote participation in car share programs to minimize the need for parking spaces in new and existing development.*	☐	☐
Not applicable	☒	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Project is not using TDM measures to reduce parking requirement due to neighbor's concern. Neighbors want to make sure this commercial project has sufficient parking so as to minimize overflow parking into their residential neighborhood		

4) Water Conservation and Urban Forestry Measures	Yes	No
MS-3.1*: Require water-efficient landscaping, which conforms to the State's Model Water Efficient Landscape Ordinance, for all new commercial, institutional, industrial and developer-installed residential development unless for recreation needs or other area functions.*	☒	☐
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Project will meet State's Model Water Efficient Landscape Ordinance		

	Yes	No
***MS-3.2**: Promote the use of green building technology or techniques that can help reduce the depletion of the City's potable water supply, as building codes permit. For example, promote the use of captured rainwater, graywater, or recycled water as the preferred source for non-potable water needs such as irrigation and building cooling, consistent with Building Codes or other regulations.*	☐	☒
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment]		
***MS-19.4**: Require the use of recycled water wherever feasible and cost-effective to serve existing and new development.*	☐	☒
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment]		
***MS-21.3**: Ensure that San José's Community Forest is comprised of species that have low water requirements and are well adapted to its Mediterranean climate. Select and plant diverse species to prevent monocultures that are vulnerable to pest invasions. Furthermore, consider the appropriate placement of tree species and their lifespan to ensure the perpetuation of the Community Forest.*	☒	☐
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Project will plant diverse species to prevent monocultures that are vulnerable to pest invasions.		
***MS-26.1**: As a condition of new development, require the planting and maintenance of both street trees and trees on private property to achieve a level of tree coverage in compliance with and that implements City laws, policies or guidelines.*	☒	☐
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment] Project will meet City's requirement on street trees and tree coverage onsite		

	Yes	No
***ER-8.7**: Encourage stormwater reuse for beneficial uses in existing infrastructure and future development through the installation of rain barrels, cisterns, or other water storage and reuse facilities.*	☐	☒
Not applicable	☐	☐
Describe how the project is consistent or why the measure is not applicable. [Either here or as an attachment]		

GHGRS Strategies

GHGRS #1: The City will implement the San José Clean Energy program to provide residents and businesses access to cleaner energy at competitive rates.

GHGRS #2: The City will implement its building reach code ordinance (adopted September 2019) and its prohibition of natural gas infrastructure ordinance (adopted October 2019) to guide the city's new construction toward zero net carbon (ZNC) buildings.

GHGRS #3: The City will expand development of rooftop solar energy through the provision of technical assistance and supportive financial incentives to make progress toward the Climate Smart San José goal of becoming a one-gigawatt solar city.

GHGRS #4: The City will support a transition to building decarbonization through increased efficiency improvements in the existing building stock and reduced use of natural gas appliances and equipment.

GHGRS #5: As an expansion to Climate Smart San José, the City will update its Zero Waste Strategic Plan and reassess zero waste strategies. Throughout the development of the update, the City will continue to divert 90 percent of waste away from landfills through source reduction, recycling, food recovery and composting, and other strategies.

GHGRS #6: The City will continue to be a partner in the Caltrain Modernization Project to enhance local transit opportunities while simultaneously improving the city's air quality.

GHGRS #7: The City will expand its water conservation efforts to achieve and sustain long-term per capita reductions that ensure a reliable water supply with a changing climate, through regional partnerships, sustainable landscape designs, green infrastructure, and water-efficient technology and systems.

Table B: 2030 Greenhouse Gas Reduction Strategy Compliance

GHGRS Strategy and Consistency Options	Description of Project Measure	Project Conformance
PART 1: RESIDENTIAL PROJECTS ONLY		
Zero Net Carbon Residential Construction 1. Achieve/exceed the City's Reach Code, and 2. Exclude natural gas infrastructure in new construction, or 3. Install on-site renewable energy systems or participate in a community solar program to offset 100% of the project's estimated energy demand, or 4. Participate in San José Clean Energy at the Total Green level (i.e., 100% carbon-free electricity) for electricity accounts associated with the project until which time SJCE achieves 100% carbon-free electricity for all accounts. **Supports Strategies**: GHGRS #1, GHGRS #2, GHGRS #3	*Describe which, if any, project consistency options from the leftmost column you are implementing.* *OR,* *Describe why this strategy is not applicable to your project.* *OR,* *Describe why such measures are infeasible.*	☐ Proposed ☐ Not Applicable ☐ Not Feasible* ☐ Alternative Measure Proposed ** The 2030 GHGRS assumed this strategy would be feasible for 50% of residential units constructed between 2020 and 2030.*
PART 2: RESIDENTIAL AND NON-RESIDENTIAL PROJECTS		
Renewable Energy Development 1. Install solar panels, solar hot water, or other clean energy power generation sources on development sites, or 2. Participate in community solar programs to support development of renewable energy in the community, or 3. Participate in San José Clean Energy at the Total Green level (i.e., 100% carbon-free electricity) for electricity accounts associated with the project. **Supports Strategies**: GHGRS #1, GHGRS #3	*Describe which, if any, project consistency options from the leftmost column you are implementing.* *OR,* *Describe why this strategy is not applicable to your project.* *OR,* *Describe why such measures are infeasible.* Project will implement #1 on leftmost column	☐ See Part 1 (Residential projects only) ☒ Proposed ☐ Not Applicable ☐ Not Feasible ☐ Alternative Measure Proposed

GHGRS Strategy and Consistency Options	Description of Project Measure	Project Conformance
Building Retrofits – Natural Gas[3] This strategy only applies to projects that include a retrofit of an existing building. If the proposed project does not include a retrofit, select "Not Applicable" in the Project Conformance column. 1. Replace an existing natural gas appliance with an electric alternative (e.g., space heater, water heater, clothes dryer), or 2. Replace an existing natural gas appliance with a high-efficiency model **Supports Strategies:** GHGRS #4	*Describe which, if any, project consistency options from the leftmost column you are implementing.* *OR,* *Describe why this strategy is not applicable to your project.* *OR,* *Describe why such measures are infeasible.* Project does not include a retrofit	☐ Proposed ☒ Not Applicable ☐ Not Feasible ☐ Alternative Measure Proposed
Zero Waste Goal 1. Provide space for organic waste (e.g., food scraps, yard waste) collection containers, and/or 2. Exceed the City's construction & demolition waste diversion requirement. **Supports Strategies:** GHGRS #5	*Describe which, if any, project consistency options from the leftmost column you are implementing.* *OR,* *Describe why this strategy is not applicable to your project.* *OR,* *Describe why such measures are infeasible.* Project will implement #1 from the leftmost column: provide space for food scraps collection containers	☒ Proposed ☐ Not Applicable ☐ Not Feasible ☐ Alternative Measure Proposed

[3] GHGRS Strategy #4 applies to existing building retrofits and not to new construction; Strategy #2 applies to new construction to reduce natural gas related GHG emissions

GHGRS Strategy and Consistency Options	Description of Project Measure	Project Conformance
Caltrain Modernization 1. For projects located within ½ mile of a Caltrain station, establish a program through which to provide project tenants and/or residents with free or reduced Caltrain passes or 2. Develop a program that provides project tenants and/or residents with options to reduce their vehicle miles traveled (e.g., a TDM program), which could include transit passes, bike lockers and showers, or other strategies to reduce project related VMT. **Supports Strategies:** GHGRS #6	*Describe which, if any, project consistency options from the leftmost column you are implementing.* *OR,* *Describe why this strategy is not applicable to your project.* *OR,* *Describe why such measures are infeasible.* Project can implement #2 from leftmost column: to develop a program that provides employees TDM program such as transit passes or bike lockers	☒ Proposed ☐ Not Applicable ☐ Not Feasible ☐ Alternative Measure Proposed
Water Conservation 1. Install high-efficiency appliances/fixtures to reduce water use, and/or include water-sensitive landscape design, and/or 2. Provide access to reclaimed water for outdoor water use on the project site. **Supports Strategies:** GHGRS #7	*Describe which, if any, project consistency options from the leftmost column you are implementing.* *OR,* *Describe why this strategy is not applicable to your project.* *OR,* *Describe why such measures are infeasible.* Project will implement #1 from leftmost column.	☒ Proposed ☐ Not Applicable ☐ Not Feasible ☐ Alternative Measure Proposed

Table C: Applicant Proposed Greenhouse Gas Reduction Measures

Description of Proposed Measure	**Description of GHG Reduction Estimate**	**Proposed Measure Implementation**
[Describe the proposed project measure and why it is proposed] **Supports Strategies/Sectors:** GHGRS #	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions.* *Include a description of how your measure will reduce emissions and provide supporting quantification documentation/assumptions.]*	☐ Part of Design ☐ Additional Measure
[Describe the proposed project measure and why it is proposed] **Supports Strategies/Sectors:** GHGRS #	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions.* *Include a description of how your measure will reduce emissions and provide supporting quantification documentation/assumptions.]*	☐ Part of Design ☐ Additional Measure
[Describe the proposed project measure and why it is proposed] **Supports Strategies/Sectors:** GHGRS #	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions.* *Include a description of how your measure will reduce emissions and provide supporting quantification documentation/assumptions.]*	☐ Part of Design ☐ Additional Measure
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