VETERANS MEMORIAL BUILDING SENIOR CENTER & YMCA AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Redwood City, California

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Introduction

The purpose of this report is to address air quality impacts and compute greenhouse gas (GHG) emissions associated with a new Veterans Memorial Building/Senior Center (VMSC) and YMCA building located at 1455 Madison Avenue in Redwood City, California. The air quality impacts and GHG emissions would be associated with the demolition of the existing uses at the site, the construction of the new building and infrastructure, and operation of the project. Air pollutant and GHG emissions associated with the construction and operation of the project were predicted using models. In addition, the potential construction health risk impact to nearby sensitive receptors and the impact of existing toxic air contaminant (TAC) sources affecting the proposed residences were evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The approximately 5.4-acre project site is located at 1455 Madison Avenue within the larger 31.7-acre Red Morton Community Park in Redwood City. The project site is located at the northern portion of the park, with Nevada Street, St. Francis Street, and Vera Avenue bisecting the site. The project site consists of the existing approximately 34,560 square foot (sf) VMSC facility, 17,175-sf pool facility, 3,500-sf NFL Alumni Building, surface parking, and landscaping. The project proposes to demolish the existing buildings and surface parking lot on-site and construct a new VMSC and YMCA. The proposed project would be implemented in two phases: Phase 1 would consist of the construction of the VMSC and traffic calming measures and Phase 2 would consist of the construction of the YMCA. To address existing traffic safety concerns regarding speeding and other unsafe driving behavior, the project proposes to install new and expand existing roundabouts, traffic circles, and median islands and curbs.

Details for each building include:

- Phase 1 - VMSC. A new two-story, approximately 45,000-sf VMSC with 57 parking stalls is proposed on the eastern portion of the site. A microgrid/battery system is proposed to provide emergency power to VMSC in the event of a power outage. The microgrid/battery system would be located at the southeast corner of the proposed parking lot for VMSC. The proposed VMSC would meet green building water and energy conservation measures.

- Phase 2 - YMCA. A new two-story, approximately 32,300-sf YMCA with 226 parking stalls is proposed on the western portion of the site. There would also be a 2,700-sf daycare facility with the capacity of 72 children. A microgrid/battery system may be installed to provide emergency power to the YMCA in the event of a power outage. The microgrid/battery system could be located south of YMCA building.

Phase 1 construction is estimated to take approximately 24 months, starting as early as January 2020 and concluding as early as December 2021. Phase 2 of the project would occur once construction of Phase 1 has been completed and once funding for the proposed YMCA has been

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

secured. It is estimated that Phase 2 construction would take approximately 24 months, starting at the latest in January 2022 and concluding in December 2023.

Setting

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

Air Pollutants of Concern

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

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

Toxic Air Contaminants

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 complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. 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, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are residents of single-family homes to the southwest to the project site opposite St. Francis Street and to the northeast of the project site opposite Madison Avenue. There is also an elementary school to the north of the project.

Regulatory Agencies

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 recently published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty

[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.

vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

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

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.[4] In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older

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

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

equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X.

Bay Area Air Quality Management District (BAAQMD)

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

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

The BAAQMD California Environmental Quality Act (*CEQA) Air Quality Guidelines*[5] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions.

Redwood City 2030 General Plan

Adopted October 11, 2010, the Redwood City 2030 General Plan includes goals, policies, and actions to improve air quality issues facing the City of San Ramon and to reduce the exposure of the City's population to air pollution.[6] The following goals, policies, and actions are applicable to the proposed project:

Goals Public Safety-1: Maintain good local air quality and reduce the local contributions of airborne pollutants to the air basin.

Policy PS-1.5	Require projects that generate potentially significant levels of air pollutants to incorporate the most effective air quality mitigation into project design, as feasible.

[5] Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.
[6] City of San Ramon, California (2015). "Public Safety Element" *Redwood City General Plan 2030.* https://www.redwoodcity.org/home/showdocument?id=5109

Goals Public Safety-2: Minimize the potential impacts from land uses that may pollute proximate to sensitive receptors

Policy PS-2.1: Consider surrounding land uses when locating sensitive receptors such as schools, hospitals, and residential uses so they are not unreasonably exposed to uses that generate pollutants considered detrimental to human health.

Goals Public Safety-5: Mitigate against and adapt to climate change

Policy PS-5.1: Consult with State agencies and ABAG to implement AB 32 and SB 375, and in particular, utilize incentives to facilitate infill and transit-oriented development.

Implementing Policies

PS-2: **Dust and Emission Abatement.**
Adopt and enforce dust and emission abatement measures for construction activities based on the BAAQMD's guidelines and other appropriate regulations.

PS-4: **Air Pollution Control Plans**.
Require developers to implement appropriate air pollution control plans to reduce dust and exhaust emissions from construction equipment.

PS-15: **Greenhouse Gas Emissions Reduction Targets.**
Adopt greenhouse gas emissions reduction targets. Targets should support the State's efforts to achieve emissions reductions mandated under AB 32, the region's efforts to implement its Sustainable Community Strategy under SB 375, and targets suggested by Executive Order S-3-05. Adopted targets will guide the City's future Climate Action Plan.

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 1,000-foot zone of influence)**	
Excess Cancer Risk	>10.0 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3	>0.8 µg/m^3	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) 660 metric tons annually or 2.8 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.

Air Quality Impacts and Mitigation Measures

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

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

are for ozone precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

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

Construction period emissions

CalEEMod provided annual emissions for construction. CalEEMod 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. A construction build-out scenario, including equipment list and schedule, was based on CalEEMod defaults for a project of this type and size. The proposed project land uses for each phase were input into CalEEMod in two modeling scenarios which included:

- Phase 1 – VMSC: 45,000-sf entered as "Health Club" and 57 spaces entered as "Parking Lot" on a 1.5-acre lot. Additionally, 27,617.5-sf of existing building demolition was entered into the CalEEMod model. The construction schedule provided by the applicant assumed that Phase 1 construction would take approximately 24 months, starting as early as January 2020 and concluding as early as December 2021. The CalEEMod default construction schedule assumes that Phase 1 would be built out over a period of approximately 12 months beginning in January 2020. Based on the CalEEMod default assumptions, there are an estimated 246 construction workdays for Phase 1.

- Phase 2 – YMCA: 32,300-sf entered as "Health Club", 72 students entered as "Day-Care Center", and 226 spaces entered as "Parking Lot" on a 2.86-acre lot. Additionally, 27,617.5-sf of existing building demolition and 1,365 cubic yards of soil excavation was entered into the CalEEMod model. The construction schedule provided by the applicant assumed that Phase 2 construction would take approximately 24 months, starting as early as January 2022 and concluding as early as December 2023. The CalEEMod default construction schedule assumes that Phase 2 would be built out over a period of approximately 13 months beginning in January 2022. Based on the CalEEMod default assumptions, there are an estimated 269 construction workdays for Phase 2.

Average daily emissions were computed for each phase by dividing the total construction emissions by the number of construction days. Table 2 shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 2, estimated the construction period emissions would not exceed the BAAQMD significance thresholds.

Table 2. Construction Period Emissions

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
PHASE 1				
Total construction emissions (tons)	0.5 tons	1.9 tons	0.1 tons	0.1 tons
Average daily emissions (pounds)[1]	**4.0 lbs/day**	**15.8 lbs/day**	**0.8 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**
PHASE 2				
Total construction emissions (tons)	0.5 tons	2.2 tons	0.1 tons	0.1 tons
Average daily emissions (pounds)[2]	**3.4 lbs/day**	**16.2 lb./day**	**0.7 lbs/day**	**0.7 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**
PHASE 1 + PHASE 2				
Total Average daily emissions (pounds)	**7.4 lbs/day**	**32.0 lbs/day**	**1.5 lbs/day**	**1.4 lbs/day**
Exceed Threshold?	**No**	**No**	**No**	**No**

Notes: [1]Assumes 246 workdays. [2]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.*

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future guests, customers, and employees. 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 the project could possibly be constructed and begin operating would be 2024. Emissions associated with build-out later than 2024 would be lower.

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided in the project trip generation table. The Saturday and Sunday trip rates were assumed to be the weekday rate adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips. The traffic analysis provided project trip generation values for the VMSC and YMCA buildings.[7] The weekday trip rate used for the "Health Club" land use was 28.82, which changed the Saturday trip rate to 18.27 and the Sunday trip rate to 23.39. The weekday trip rate used for the "Day-Care Center" land use was 4.09, which changed the Saturday trip rate to 0.36 and the Sunday trip rate to 0.35.

Energy

CalEEMod defaults for energy use were used, which include the 2016 Title 24 Building Standards. Indirect emissions from electricity were computed in CalEEMod. The model has a default rate of 641.3 pounds of CO_2 per megawatt of electricity produced, which is based on PG&E's 2008 emissions rate. Peninsula Clean Energy (PCE) now provides electricity to Redwood City, with 50 percent renewable and 75 percent being carbon free electricity. The rate was adjusted to account for PCE's 2017 CO_2 intensity rate. The 2017 rate provided by PCE was 142.26 pounds of CO_2 per megawatt of electricity delivered.[8]

Other Inputs

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

Existing Uses

A CalEEMod model run was developed to compute emissions from use of the existing building as if it was operating in 2024. The input for this modeling scenario included 55,235-sf entered as "Health Club" and 78 spaces entered as "Parking Lot" on a 3.06-acre lot. The weekday trip rate used for the "Health Club" land use was 28.82, which changed the Saturday trip rate to 18.27 and the Sunday trip rate to 23.39.

As shown in Table 3, operational emissions would not exceed the BAAQMD significance thresholds. This would be considered a *less-than-significant* impact.

[7] Hexagon Traffic Consultants, Inc. "Joint Senior Center and YMCA Facility", February 2019.
[8] Correspondence with Michael Totah, Peninsula Clean Energy, April 11, 2019.

Table 3. Operational Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2024 Phase 1 Project Operational Emissions (tons/year)	0.4 tons	0.8 tons	0.8 tons	0.2 tons
2024 Phase 2 Project Operational Emissions (tons/year)	0.4 tons	0.5 tons	0.7 tons	0.2 tons
2024 Total Project Operational Emissions (tons/year)	0.8 tons	1.3 tons	1.5 tons	0.4 tons
2024 Existing Use Emissions (tons/year)	0.5 tons	0.8 tons	1.0 tons	0.3 tons
Net Annual Emissions (tons/year)	**0.3 tons**	**0.5 tons**	**0.5 tons**	**0.1 tons**
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	***No***	***No***	***No***	***No***
2024 Net Project Operational Emissions (*pounds/day*)	1.6 lbs	2.9 lbs	2.6 lbs	0.7 lbs
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	***No***	***No***	***No***	***No***

[1] Assumes 365-day operation.

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

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

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

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

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

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

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

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

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

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

Effectiveness of Mitigation Measure AQ-1

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

Impact 2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. In addition, temporary project construction activity would generate dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors. Community risk impacts are addressed by predicting increased lifetime cancer risk, the increase in annual $PM_{2.5}$ concentrations, and computing the Hazard Index (HI) for non-cancer health risks. The methodology for computing community risks impacts is contained in *Attachment 1*.

Project Operation

The long-term operation of the project is not expected to cause any localized emissions that could expose sensitive receptors to unhealthy air pollutant levels. When operating, the project would generate automobile traffic and infrequent truck traffic; however, these emissions are anticipated to result in fairly low impacts in terms of TAC or $PM_{2.5}$ exposure and there would be no other operational sources of TAC or $PM_{2.5}$. No stationary sources of TACs, such as generators, are proposed as part of the project.

Construction Community Risk Impacts

The project proposes to install new and expand existing roundabouts, traffic circles, and median islands and curbs. Construction of the proposed traffic calming measures would only occur for a few weeks with the use of minimal equipment. Due to the short construction duration and minimal construction emissions, the traffic calming measures were not evaluated in the construction analysis.

Project Construction Activity

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects of sensitive receptors at these nearby residences from construction emissions of DPM and $PM_{2.5}$.[9] The closest sensitive receptors to the project site are residents of single-family homes to the southwest to the project site opposite St. Francis Street and to the northeast of the project site opposite Madison Avenue. There is also an elementary school to the north of the project (see Figure 1). Emissions and dispersion modeling was conducted to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Period Emissions

The CalEEMod model provided total uncontrolled annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages of 0.0964 tons (193 pounds) for Phase 1 and 0.09172 tons (183 pounds) for Phase 2. The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions for the overall construction period were calculated by CalEEMod as 0.0110 tons (22 pounds) for Phase 1 and 0.01431 tons (29 pounds) for Phase 2.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences and school) in the vicinity of the project construction area for each phase. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[10] For each of the construction sites modeled, the modeling utilized two area sources to represent the on-site construction emissions, one for exhaust emissions and one for fugitive dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (19.7 feet) was used for the area sources. The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 2 meters (6.6 feet) was used for the area sources.

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

Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7 a.m. to 4 p.m., when the majority of construction activity would occur.

The modeling used a five-year data set (2009-2013) of hourly meteorological data from the San Carlos Airport meteorological site that was prepared for use with the AERMOD model by the CARB. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2020-2023 period were calculated using the model. Each phase's construction emissions were calculated and distributed over two years per phase to be consistent with the applicant's construction schedule. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors. Receptor heights of 1.5 meters (5 feet) and 4.5 meters (15 feet) were used to represent the breathing heights of residents on the first and second levels of nearby housing. A receptor height of 1.0 meter was used for modeling impacts to children at the school.

Predicted Construction Period Impacts

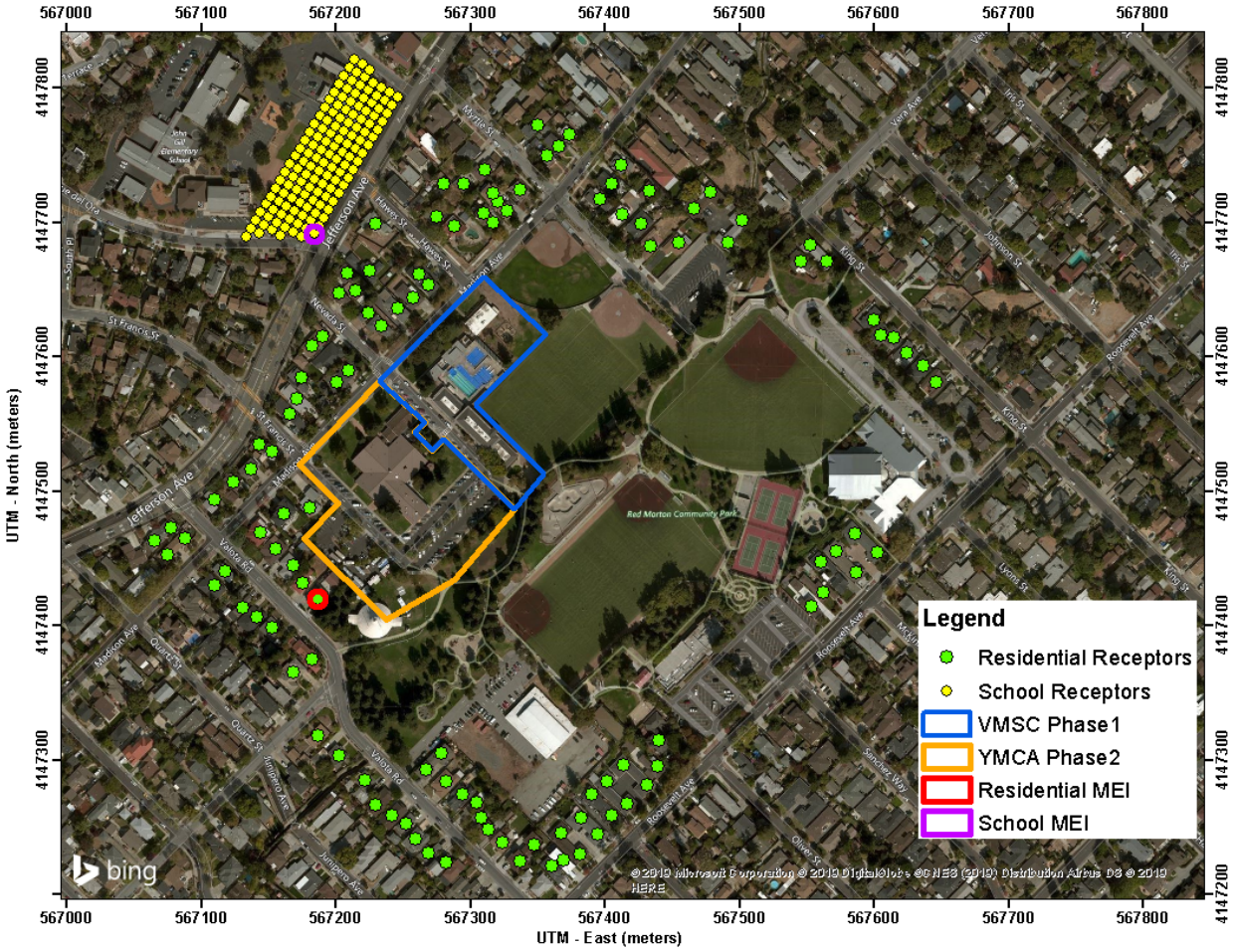
Increased cancer risks were calculated using the maximum modeled concentrations for the 2020-2023 period and BAAQMD recommended risk assessment methods for an infant exposure (3rd trimester through two years of age), children (two through nine years), and for an adult exposure. The cancer risk calculations were based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations, as described *Attachment 1*. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Infant and adult exposures were assumed to occur at all residences and children exposures were assumed to occur at the school through the entire construction period. *Attachment 3* includes the emission calculations and source information used in the modeling and the cancer risk calculations.

Figure 1 shows the location where the maximum-modeled DPM and $PM_{2.5}$ concentrations occurred. The maximum concentrations occurred on the first floor (1.5 meters) of the adjacent residential building to the southwest of the Phase 2 project area. Results of the assessment for project construction indicate the maximum incremental residential infant cancer risk at this maximally exposed individual (MEI) receptor would be 20.5 in one million and the residential adult incremental cancer risk would be 0.3 in one million. The school child incremental cancer risk at the school MEI would be 1.6 in one million. The maximum residential increased cancer risk for an infant at the residential MEI would exceed the BAAQMD significance threshold of 10 in one million.

The maximum-modeled annual $PM_{2.5}$ concentration, which is based on combined exhaust and fugitive dust emissions, was 0.14 $\mu g/m^3$ at the residential MEI and 0.03 $\mu g/m^3$ at the school MEI. These maximum annual $PM_{2.5}$ concentrations would not exceed the BAAQMD significance threshold of 0.3 $\mu g/m^3$.

The maximum modeled annual DPM concentration (i.e., from construction exhaust) was 0.1149 $\mu g/m^3$ at the residential MEI and 0.0255 $\mu g/m^3$ at the school MEI. The maximum computed hazard index (HI) based on these DPM concentrations are 0.02 at the residential MEI and 0.01 at the school MEI, which are lower than the BAAQMD significance criterion of a HI greater than 1.0.

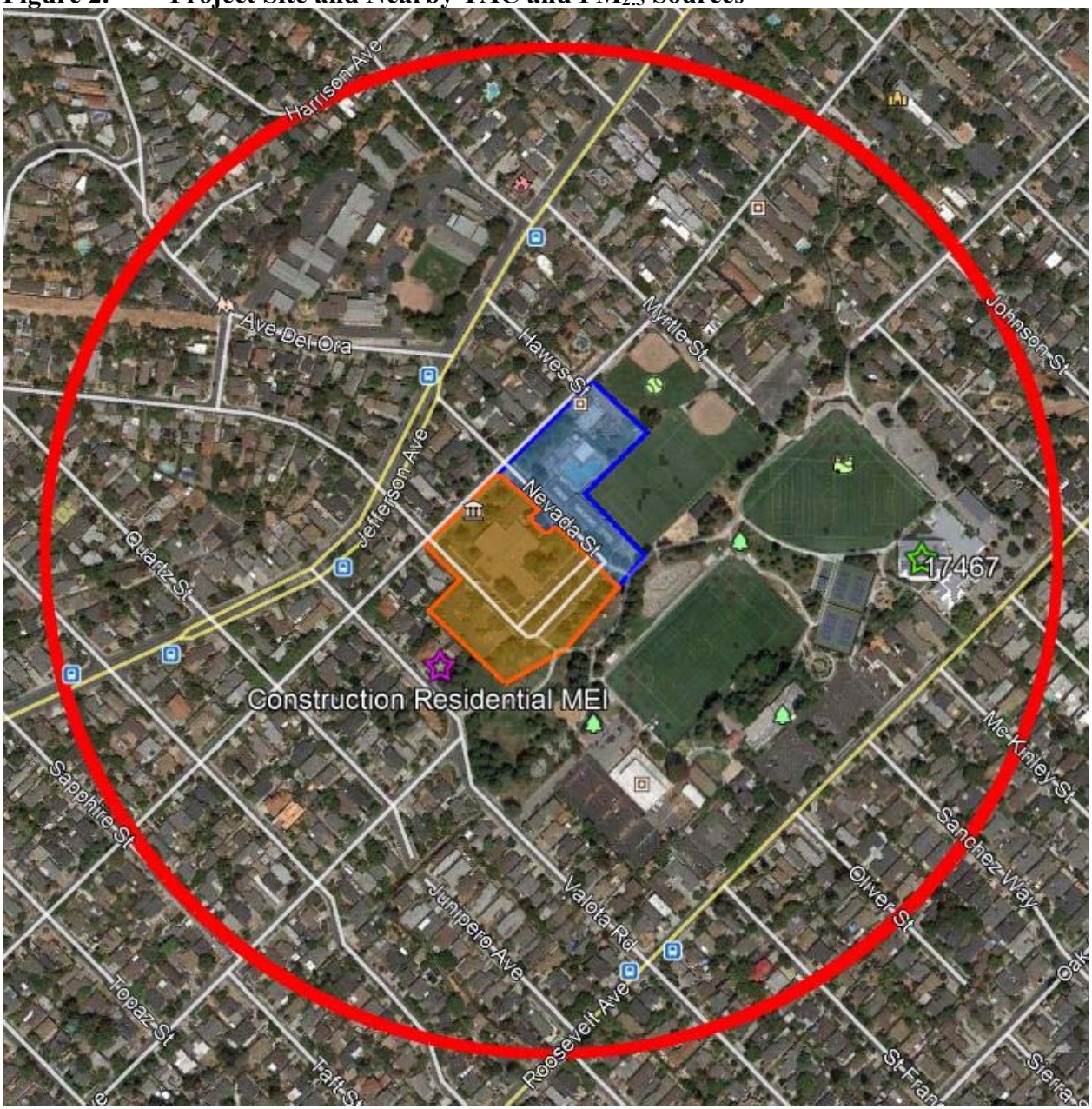
Figure 1. Project Site, Construction Modeling Sources, and Locations of Off-Site Sensitive Receptors and Maximum TAC Impacts



Cumulative Impact on Residential Construction MEI

Cumulative community risk impacts were addressed through evaluation of TAC sources located within 1,000 feet of the project site. These sources include freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that traffic on Jefferson Avenue would exceed 10,000 vehicles per day. Other nearby streets are assumed to have less than 10,000 vehicles per day. A review of BAAQMD's stationary source Google Earth map tool identified one stationary source with the potential to affect the residential construction MEI. Figure 2 shows the sources affecting the project site and residential construction MEI. Community risk impacts from these sources upon the residential construction MEI are reported in Table 4. Details of the modeling and community risk calculations are included in *Attachment 4.*

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



Local Roadways

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

The calculator uses EMFAC2011 emission rates for the year 2014. Overall, emission rates will decrease by the time the project is constructed and occupied. The project would not be occupied prior to at least 2018. In addition, a new version of the emissions factor model, EMFAC2014 is available. This version predicts lower emission rates. An adjustment factor of 0.5 was developed by comparing emission rates of total organic gases (TOG) for running exhaust and running losses developed using EMFAC2011 for year 2014 and those from EMFAC2014 for 2018. The predicted cancer risk was then adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict cancer risk.

Jefferson Avenue was identified as having over 10,000 vehicles per day. The average daily traffic (ADT) on Jefferson Avenue was estimated to be 23,950 vehicles. This estimate was based on the peak-hour traffic volumes included in the project's traffic analysis for cumulative plus project conditions. The AM and PM peak-hour volumes were averaged and then multiplied by 10 to estimate the ADT.

The BAAQMD *Roadway Screening Analysis Calculator* for San Mateo County was used for the roadway. Jefferson Avenue was identified as an east-west roadway with the residential construction MEI receptors south of the roadway. Estimated risk values for the roadway are listed in Table 4. Note that BAAQMD has found that non-cancer hazards from all local roadways would be below 0.03.

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth and identified the location of one stationary source and its estimated risk and hazard impacts. A Stationary Source Information Form (SSIF) containing the one identified source (Plant #17467) was prepared and submitted to BAAQMD. The District provided updated risk levels, emissions, and adjustments to account for new OEHHA guidance.[11] The risk values were then adjusted with the appropriate distance multiplier values provided by BAAQMD or the emissions information was used in refined modeling.

The one stationary source (Plant #17467) was identified as a generator. The screening risk levels for this stationary source was provided by BAAQMD and adjusted for distance based on BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines.* Concentrations and community risk impacts from this source upon the residential construction MEI is reported in Table 4.

Cumulative Summary

Cumulative TAC impacts are assessed by predicting the combined community risk impacts to the project and nearby sources. Table 4 reports both the project and cumulative community risk impacts at the residential construction MEI. The project would have a *significant* impact with respect to community risk caused by project construction activities, since the maximum cancer

[11] Correspondence with Areana Flores, BAAQMD, March 5, 2019.

risk is above the single-source thresholds of 10.0 per million for cancer risk. As shown in Table 4, the combined cancer risk, $PM_{2.5}$ concentrations, and Hazard risk values, which includes unmitigated and mitigated, would not exceed the cumulative thresholds. *Mitigation Measures AQ-2 would reduce these impacts to a level of less-than-significant.*

Table 4. Impacts from Combined Sources at Residential Construction MEI

Source		Maximum Cancer Risk (per million)	$PM_{2.5}$ concentration ($\mu g/m^3$)	Hazard Index
Project Construction	Unmitigated	**20.5 (infant)**	0.14	0.03
	Mitigated	3.5 (infant)	0.03	0.01
BAAQMD Threshold – Single Sources		***>10.0***	***>0.3***	***>1.0***
Significant?	*Unmitigated*	***Yes***	*No*	*No*
	Mitigated	*No*	*No*	*No*
Jefferson Avenue at 380 feet, ADT 23,950		1.9	0.07	<0.03
Plant #17467 (Generator) at +1,000 feet		0.2	<0.01	<0.01
Combined Sources	*Unmitigated*	22.6	0.22	<0.07
	Mitigated	5.6	0.11	<0.05
BAAQMD Threshold – Combined Sources		***>100***	***>0.8***	***>10.0***
Significant?	*Unmitigated*	*No*	*No*	*No*
	Mitigated	*No*	*No*	*No*

Mitigation Measure AQ-2: **Selection of equipment during construction to minimize emissions. Such equipment selection would include the following:**

The project shall develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 55-percent reduction in DPM exhaust emissions or greater. The following are feasible methods:

- 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 3 engines with CARB-certified Level 3 Diesel Particulate Filters[12] or equivalent.
- 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 Tier 4 standards for particulate matter.
- The use of equipment that includes electric or alternatively-fueled equipment (i.e., non-diesel) would meet the reduction requirement above.

Effectiveness of Mitigation Measure AQ-2

The computed maximum increased lifetime residential cancer risk from construction, assuming infant exposure, would be 3.5 in one million or less with implementation of Mitigation Measure AQ-2. As a result, impacts would be reduced to *less-than-significant* with respect to community risk caused by construction activities.

[12] See http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm

Greenhouse Gas Emissions

Setting

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

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

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

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

Recent Regulatory Actions

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

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

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

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

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

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

SB 350 Renewable Portfolio Standards

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

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

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

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

goal). Key features of this plan are:

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

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

BAAQMD Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). For quantified emissions, the guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate. Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_2e/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels.[13] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_2e/year threshold.

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

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

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project and existing land use types and size and other project-specific information were input to the model, as described above. In addition, the water and energy measures for the VMSC building were entered into the CalEEMod mitigation measures section. 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. For this project, the number of future employees is anticipated to be 8 full-time employees at the VMSC, 10 full-time employees at the YMCA, and 5 full-time employees at the daycare based on information provided by the project applicant. The total future service population would be 23 employees.

Construction Emissions

GHG emissions associated with construction were computed to be 647 MT of CO_2e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully-developed site under the proposed project. As shown in Table 5, the annual net emissions from operation of the proposed project with the water and energy mitigation measures are predicted to be 484 MT CO_{2e} in the year 2024 and 281 MT CO_{2e} in the year 2030. The unmitigated emissions would only be slightly more with 489 MT CO_{2e} in the year 2024 and 286 MT CO_{2e} in the year 2030.The service population emissions would be 75.3 CO_{2e}/year/service population in 2024 and 66.5 CO_{2e}/year/service population in 2030.

To be considered significant, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold. This project does not exceed the 2030 significant thresholds for CO_{2e} in metric tons. Therefore, the project would have a *less-than-significant* impact regarding GHG emissions.

Table 5. Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Existing in 2024	Proposed Project in 2024	Proposed Project in 2030
Area	<1	<1	<1
Energy Consumption	203	142	142
Mobile	874	1,357	1,154
Solid Waste Generation	158	228	228
Water Usage	12	5	5
Total	1,248	1,732	1,529
Net New Emissions		484	281
Significance Threshold			***660 MT CO_{2e}/yr***
Service Population Emissions		75.3	66.5
Significance Threshold (CO_{2e}/year/service population)			***2.8 in 2030***
Significant (Exceeds both thresholds)?			No

Supporting Documentation

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

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

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

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

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[14] 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.[15] 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.[16] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs are calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency 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). 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 breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

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

30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD.

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

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

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

Where:

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

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

Where:

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

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

Parameter	*Exposure Type* →	Infant		Child		Adult
	Age Range →	3rd Trimester	0<2	2 < 9	2 < 16	16 - 30
DPM Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80th Percentile Rate		273	758	631	572	261
Daily Breathing Rate (L/kg-day) 95th Percentile Rate		361	1,090	861	745	335
Inhalation Absorption Factor		1	1	1	1	1
Averaging Time (years)		70	70	70	70	70
Exposure Duration (years)		0.25	2	14	14	14
Exposure Frequency (days/year)		350	350	350	350	350
Age Sensitivity Factor		10	10	3	3	1
Fraction of Time at Home		0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73

Non-Cancer Hazards

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

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

Annual $PM_{2.5}$ Concentrations

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

Attachment 2: CalEEMod Modeling Output

Veterans Memorial - Senior Center Phase 1 - San Mateo County, Annual

Veterans Memorial - Senior Center Phase 1

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	57.00	Space	0.51	22,800.00	0
Health Club	45.00	1000sqft	1.03	45,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2022
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	142.26	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy 2017 CO2 Rate = 142.26

Land Use - Applicant provided land uses, default acreage

Construction Phase - Default construction schedule

Off-road Equipment - Default constructoin equipment

Demolition - Existing building 55,235sf / 2 = 27,617.5sf building demo

Vehicle Trips - health club = 28.82, 18.27, 23.39

Energy Use -

Water And Wastewater - WTP Treatment, 100% aerobic

Mobile Land Use Mitigation -

Energy Mitigation - effecient LED lighting

Water Mitigation - Water conservation measures, on-site storage and low flow

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	142.26
tblProjectCharacteristics	N2OIntensityFactor	0	0.006
tblVehicleTrips	ST_TR	20.87	18.27
tblVehicleTrips	SU_TR	26.73	23.39
tblVehicleTrips	WD_TR	32.93	28.82
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					
2020	0.4873	1.9410	1.6581	3.1400e-003	0.0615	0.0971	0.1585	0.0188	0.0932	0.1120	0.0000	268.1587	268.1587	0.0460	0.0000	269.3075
Maximum	**0.4873**	**1.9410**	**1.6581**	**3.1400e-003**	**0.0615**	**0.0971**	**0.1585**	**0.0188**	**0.0932**	**0.1120**	**0.0000**	**268.1587**	**268.1587**	**0.0460**	**0.0000**	**269.3075**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.4873	1.9410	1.6581	3.1400e-003	0.0615	0.0971	0.1585	0.0188	0.0932	0.1120	0.0000	268.1585	268.1585	0.0460	0.0000	269.3072
Maximum	**0.4873**	**1.9410**	**1.6581**	**3.1400e-003**	**0.0615**	**0.0971**	**0.1585**	**0.0188**	**0.0932**	**0.1120**	**0.0000**	**268.1585**	**268.1585**	**0.0460**	**0.0000**	**269.3072**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2020**	**3-31-2020**	0.6611	0.6611
2	**4-1-2020**	**6-30-2020**	0.5928	0.5928
3	**7-1-2020**	**9-30-2020**	0.5993	0.5993
		Highest	0.6611	0.6611

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	0.2013	1.0000e-005	9.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-003
Energy	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	81.9013	81.9013	5.7200e-003	2.0400e-003	82.6514
Mobile	0.2498	0.7144	2.5499	8.2400e-003	0.7649	7.1400e-003	0.7721	0.2056	6.6600e-003	0.2122	0.0000	753.9834	753.9834	0.0282	0.0000	754.6892
Waste						0.0000	0.0000		0.0000	0.0000	52.0672	0.0000	52.0672	3.0771	0.0000	128.9942
Water						0.0000	0.0000		0.0000	0.0000	0.9416	1.2977	2.2393	3.5100e-003	2.1000e-003	2.9535
Total	**0.4570**	**0.7690**	**2.5967**	**8.5700e-003**	**0.7649**	**0.0113**	**0.7762**	**0.2056**	**0.0108**	**0.2164**	**53.0088**	**837.1842**	**890.1930**	**3.1145**	**4.1400e-003**	**969.2903**

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	0.2013	1.0000e-005	9.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-003
Energy	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	77.3027	77.3027	4.7800e-003	1.8400e-003	77.9716
Mobile	0.2498	0.7144	2.5499	8.2400e-003	0.7649	7.1400e-003	0.7721	0.2056	6.6600e-003	0.2122	0.0000	753.9834	753.9834	0.0282	0.0000	754.6892
Waste						0.0000	0.0000		0.0000	0.0000	52.0672	0.0000	52.0672	3.0771	0.0000	128.9942
Water						0.0000	0.0000		0.0000	0.0000	0.9416	1.1135	2.0551	3.4700e-003	2.0900e-003	2.7660
Total	**0.4570**	**0.7690**	**2.5967**	**8.5700e-003**	**0.7649**	**0.0113**	**0.7762**	**0.2056**	**0.0108**	**0.2164**	**53.0088**	**832.4014**	**885.4103**	**3.1136**	**3.9300e-003**	**964.4230**

	ROG	NOx	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**	**0.57**	**0.54**	**0.03**	**5.07**	**0.50**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	1/30/2020	5	2	
3	Grading	Grading	1/31/2020	2/5/2020	5	4	
4	Building Construction	Building Construction	2/6/2020	11/11/2020	5	200	
5	Paving	Paving	11/12/2020	11/25/2020	5	10	
6	Architectural Coating	Architectural Coating	11/26/2020	12/9/2020	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0.51

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 67,500; Non-Residential Outdoor: 22,500; 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	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	126.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	28.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0136	0.0000	0.0136	2.0600e-003	0.0000	2.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0213	0.2095	0.1466	2.4000e-004		0.0115	0.0115		0.0108	0.0108	0.0000	21.0677	21.0677	5.4200e-003	0.0000	21.2031

Total	**0.0213**	**0.2095**	**0.1466**	**2.4000e-004**	**0.0136**	**0.0115**	**0.0251**	**2.0600e-003**	**0.0108**	**0.0128**	**0.0000**	**21.0677**	**21.0677**	**5.4200e-003**	**0.0000**	**21.2031**

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	5.6000e-004	0.0203	8.4800e-003	5.0000e-005	1.0500e-003	6.0000e-005	1.1200e-003	2.9000e-004	6.0000e-005	3.5000e-004	0.0000	5.2625	5.2625	6.6000e-004	0.0000	5.2789
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.4000e-004	2.5300e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8522	0.8522	2.0000e-005	0.0000	0.8526
Total	**9.1000e-004**	**0.0206**	**0.0110**	**6.0000e-005**	**2.0700e-003**	**7.0000e-005**	**2.1500e-003**	**5.6000e-004**	**7.0000e-005**	**6.3000e-004**	**0.0000**	**6.1147**	**6.1147**	**6.8000e-004**	**0.0000**	**6.1315**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0136	0.0000	0.0136	2.0600e-003	0.0000	2.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0213	0.2095	0.1466	2.4000e-004		0.0115	0.0115		0.0108	0.0108	0.0000	21.0676	21.0676	5.4200e-003	0.0000	21.2030
Total	**0.0213**	**0.2095**	**0.1466**	**2.4000e-004**	**0.0136**	**0.0115**	**0.0251**	**2.0600e-003**	**0.0108**	**0.0128**	**0.0000**	**21.0676**	**21.0676**	**5.4200e-003**	**0.0000**	**21.2030**

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	5.6000e-004	0.0203	8.4800e-003	5.0000e-005	1.0500e-003	6.0000e-005	1.1200e-003	2.9000e-004	6.0000e-005	3.5000e-004	0.0000	5.2625	5.2625	6.6000e-004	0.0000	5.2789
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.4000e-004	2.5300e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8522	0.8522	2.0000e-005	0.0000	0.8526
Total	**9.1000e-004**	**0.0206**	**0.0110**	**6.0000e-005**	**2.0700e-003**	**7.0000e-005**	**2.1500e-003**	**5.6000e-004**	**7.0000e-005**	**6.3000e-004**	**0.0000**	**6.1147**	**6.1147**	**6.8000e-004**	**0.0000**	**6.1315**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
Total	**1.6300e-003**	**0.0184**	**7.7100e-003**	**2.0000e-005**	**5.8000e-003**	**8.2000e-004**	**6.6200e-003**	**2.9500e-003**	**7.6000e-004**	**3.7100e-003**	**0.0000**	**1.5127**	**1.5127**	**4.9000e-004**	**0.0000**	**1.5249**

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	2.0000e-005	1.0000e-005	1.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0524	0.0524	0.0000	0.0000	0.0525
Total	**2.0000e-005**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0524**	**0.0524**	**0.0000**	**0.0000**	**0.0525**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
Total	**1.6300e-003**	**0.0184**	**7.7100e-003**	**2.0000e-005**	**5.8000e-003**	**8.2000e-004**	**6.6200e-003**	**2.9500e-003**	**7.6000e-004**	**3.7100e-003**	**0.0000**	**1.5127**	**1.5127**	**4.9000e-004**	**0.0000**	**1.5249**

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	2.0000e-005	1.0000e-005	1.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0524	0.0524	0.0000	0.0000	0.0525

Total	**2.0000e-005**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0524**	**0.0524**	**0.0000**	**0.0000**	**0.0525**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980
Total	**2.7000e-003**	**0.0302**	**0.0129**	**3.0000e-005**	**9.8300e-003**	**1.3700e-003**	**0.0112**	**5.0500e-003**	**1.2600e-003**	**6.3100e-003**	**0.0000**	**2.4779**	**2.4779**	**8.0000e-004**	**0.0000**	**2.4980**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1049	0.1049	0.0000	0.0000	0.1049
Total	**4.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1049**	**0.1049**	**0.0000**	**0.0000**	**0.1049**

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					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980
Total	**2.7000e-003**	**0.0302**	**0.0129**	**3.0000e-005**	**9.8300e-003**	**1.3700e-003**	**0.0112**	**5.0500e-003**	**1.2600e-003**	**6.3100e-003**	**0.0000**	**2.4779**	**2.4779**	**8.0000e-004**	**0.0000**	**2.4980**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1049	0.1049	0.0000	0.0000	0.1049
Total	**4.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1049**	**0.1049**	**0.0000**	**0.0000**	**0.1049**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

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

Off-Road	0.2031	1.4788	1.3188	2.2000e-003		0.0796	0.0796		0.0769	0.0769	0.0000	181.5421	181.5421	0.0337	0.0000	182.3847
Total	**0.2031**	**1.4788**	**1.3188**	**2.2000e-003**		**0.0796**	**0.0796**		**0.0769**	**0.0769**	**0.0000**	**181.5421**	**181.5421**	**0.0337**	**0.0000**	**182.3847**

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	4.2600e-003	0.1276	0.0508	2.9000e-004	7.1700e-003	6.4000e-004	7.8100e-003	2.0700e-003	6.1000e-004	2.6800e-003	0.0000	29.1493	29.1493	2.5300e-003	0.0000	29.2126
Worker	7.6400e-003	5.1700e-003	0.0545	2.0000e-004	0.0220	1.4000e-004	0.0222	5.8700e-003	1.3000e-004	5.9900e-003	0.0000	18.3548	18.3548	3.6000e-004	0.0000	18.3638
Total	**0.0119**	**0.1327**	**0.1053**	**4.9000e-004**	**0.0292**	**7.8000e-004**	**0.0300**	**7.9400e-003**	**7.4000e-004**	**8.6700e-003**	**0.0000**	**47.5041**	**47.5041**	**2.8900e-003**	**0.0000**	**47.5764**

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	0.2031	1.4788	1.3188	2.2000e-003		0.0796	0.0796		0.0769	0.0769	0.0000	181.5419	181.5419	0.0337	0.0000	182.3844
Total	**0.2031**	**1.4788**	**1.3188**	**2.2000e-003**		**0.0796**	**0.0796**		**0.0769**	**0.0769**	**0.0000**	**181.5419**	**181.5419**	**0.0337**	**0.0000**	**182.3844**

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	4.2600e-003	0.1276	0.0508	2.9000e-004	7.1700e-003	6.4000e-004	7.8100e-003	2.0700e-003	6.1000e-004	2.6800e-003	0.0000	29.1493	29.1493	2.5300e-003	0.0000	29.2126
Worker	7.6400e-003	5.1700e-003	0.0545	2.0000e-004	0.0220	1.4000e-004	0.0222	5.8700e-003	1.3000e-004	5.9900e-003	0.0000	18.3548	18.3548	3.6000e-004	0.0000	18.3638
Total	**0.0119**	**0.1327**	**0.1053**	**4.9000e-004**	**0.0292**	**7.8000e-004**	**0.0300**	**7.9400e-003**	**7.4000e-004**	**8.6700e-003**	**0.0000**	**47.5041**	**47.5041**	**2.8900e-003**	**0.0000**	**47.5764**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8829	5.8829	1.8600e-003	0.0000	5.9295
Paving	6.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.8700e-003**	**0.0423**	**0.0444**	**7.0000e-005**		**2.3500e-003**	**2.3500e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**5.8829**	**5.8829**	**1.8600e-003**	**0.0000**	**5.9295**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.2600e-003	0.0000	5.1000e-004	0.0000	5.1000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4261	0.4261	1.0000e-005	0.0000	0.4263
Total	**1.8000e-004**	**1.2000e-004**	**1.2600e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.1000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4261**	**0.4261**	**1.0000e-005**	**0.0000**	**0.4263**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8828	5.8828	1.8600e-003	0.0000	5.9295
Paving	6.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.8700e-003**	**0.0423**	**0.0444**	**7.0000e-005**		**2.3500e-003**	**2.3500e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**5.8828**	**5.8828**	**1.8600e-003**	**0.0000**	**5.9295**

Mitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.2600e-003	0.0000	5.1000e-004	0.0000	5.1000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4261	0.4261	1.0000e-005	0.0000	0.4263
Total	**1.8000e-004**	**1.2000e-004**	**1.2600e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.1000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4261**	**0.4261**	**1.0000e-005**	**0.0000**	**0.4263**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2394					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.2406**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

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	8.0000e-005	6.0000e-005	5.8000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1967	0.1967	0.0000	0.0000	0.1968
Total	**8.0000e-005**	**6.0000e-005**	**5.8000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1967**	**0.1967**	**0.0000**	**0.0000**	**0.1968**

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	0.2394					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.2406**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

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	8.0000e-005	6.0000e-005	5.8000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1967	0.1967	0.0000	0.0000	0.1968
Total	**8.0000e-005**	**6.0000e-005**	**5.8000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1967**	**0.1967**	**0.0000**	**0.0000**	**0.1968**

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	0.2498	0.7144	2.5499	8.2400e-003	0.7649	7.1400e-003	0.7721	0.2056	6.6600e-003	0.2122	0.0000	753.9834	753.9834	0.0282	0.0000	754.6892
Unmitigated	0.2498	0.7144	2.5499	8.2400e-003	0.7649	7.1400e-003	0.7721	0.2056	6.6600e-003	0.2122	0.0000	753.9834	753.9834	0.0282	0.0000	754.6892

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	1,296.90	822.15	1052.55	2,063,130	2,063,130
Parking Lot	0.00	0.00	0.00		
Total	1,296.90	822.15	1,052.55	2,063,130	2,063,130

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
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Health Club	0.476244	0.050164	0.262181	0.139658	0.017521	0.006864	0.023236	0.006525	0.004137	0.003158	0.009064	0.000471	0.000777
Parking Lot	0.476244	0.050164	0.262181	0.139658	0.017521	0.006864	0.023236	0.006525	0.004137	0.003158	0.009064	0.000471	0.000777

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	17.8688	17.8688	3.6400e-003	7.5000e-004	18.1844
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22.4674	22.4674	4.5800e-003	9.5000e-004	22.8643
NaturalGas Mitigated	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	59.4339	59.4339	1.1400e-003	1.0900e-003	59.7871
NaturalGas Unmitigated	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	59.4339	59.4339	1.1400e-003	1.0900e-003	59.7871

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					
Health Club	1.11375e+006	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	59.4339	59.4339	1.1400e-003	1.0900e-003	59.7871
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.0100e-003**	**0.0546**	**0.0459**	**3.3000e-004**		**4.1500e-003**	**4.1500e-003**		**4.1500e-003**	**4.1500e-003**	**0.0000**	**59.4339**	**59.4339**	**1.1400e-003**	**1.0900e-003**	**59.7871**

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					
Health Club	1.11375e+006	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	59.4339	59.4339	1.1400e-003	1.0900e-003	59.7871
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.0100e-003**	**0.0546**	**0.0459**	**3.3000e-004**		**4.1500e-003**	**4.1500e-003**		**4.1500e-003**	**4.1500e-003**	**0.0000**	**59.4339**	**59.4339**	**1.1400e-003**	**1.0900e-003**	**59.7871**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	340200	21.9524	4.4800e-003	9.3000e-004	22.3402
Parking Lot	7980	0.5149	1.0000e-004	2.0000e-005	0.5240
Total		**22.4674**	**4.5800e-003**	**9.5000e-004**	**22.8643**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	272925	17.6113	3.5900e-003	7.4000e-004	17.9224

Parking Lot	3990	0.2575	5.0000e-005	1.0000e-005	0.2620
Total		**17.8688**	**3.6400e-003**	**7.5000e-004**	**18.1844**

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	0.2013	1.0000e-005	9.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-003
Unmitigated	0.2013	1.0000e-005	9.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-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	0.0239					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1772					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-003

Total	**0.2013**	**1.0000e-005**	**9.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8200e-003**	**1.8200e-003**	**0.0000**	**0.0000**	**1.9400e-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	0.0239					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1772					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-003
Total	**0.2013**	**1.0000e-005**	**9.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8200e-003**	**1.8200e-003**	**0.0000**	**0.0000**	**1.9400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

Mitigated	2.0551	3.4700e-003	2.0900e-003	2.7660
Unmitigated	2.2393	3.5100e-003	2.1000e-003	2.9535

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	2.66144 / 1.63121	2.2393	3.5100e-003	2.1000e-003	2.9535
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.2393**	**3.5100e-003**	**2.1000e-003**	**2.9535**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	2.66144 / 0.815603	2.0551	3.4700e-003	2.0900e-003	2.7660
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.0551**	**3.4700e-003**	**2.0900e-003**	**2.7660**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	52.0672	3.0771	0.0000	128.9942
Unmitigated	52.0672	3.0771	0.0000	128.9942

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	256.5	52.0672	3.0771	0.0000	128.9942
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**52.0672**	**3.0771**	**0.0000**	**128.9942**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	256.5	52.0672	3.0771	0.0000	128.9942
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**52.0672**	**3.0771**	**0.0000**	**128.9942**

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

Veterans Memorial - YMCA Phase 2

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Day-Care Center	72.00	Student	0.09	2,700.00	0
Parking Lot	226.00	Space	2.03	90,400.00	0
Health Club	32.30	1000sqft	0.74	32,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2024
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	142.26	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy 2017 CO2 Rate = 142.26

Land Use - Applicant provided land uses, default acreage

Construction Phase - Default construction schedule

Off-road Equipment - Default constructoin equipment

Demolition - Existing building 55,235sf / 2 = 27,617.5sf building demo

Vehicle Trips - health club = 28.82, 18.27, 23.39, daycare = 4.09, 0.36, 0.35

Energy Use -

Water And Wastewater - WTP Treatment, 100% aerobic

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Grading - 1,365cy export

Trips and VMT -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	1,365.00
tblLandUse	LandUseSquareFeet	4,069.64	2,700.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	142.26
tblProjectCharacteristics	N2OIntensityFactor	0	0.006
tblVehicleTrips	ST_TR	0.39	0.36
tblVehicleTrips	ST_TR	20.87	18.27
tblVehicleTrips	SU_TR	0.37	0.35
tblVehicleTrips	SU_TR	26.73	23.39
tblVehicleTrips	WD_TR	4.38	4.09
tblVehicleTrips	WD_TR	32.93	28.82
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2781	2.1705	2.0468	4.3000e-003	0.1011	0.0921	0.1933	0.0302	0.0879	0.1181	0.0000	374.7821	374.7821	0.0621	0.0000	376.3348
2023	0.1822	5.9300e-003	8.9200e-003	2.0000e-005	3.9000e-004	3.2000e-004	7.1000e-004	1.0000e-004	3.2000e-004	4.2000e-004	0.0000	1.4391	1.4391	7.0000e-005	0.0000	1.4409
Maximum	**0.2781**	**2.1705**	**2.0468**	**4.3000e-003**	**0.1011**	**0.0921**	**0.1933**	**0.0302**	**0.0879**	**0.1181**	**0.0000**	**374.7821**	**374.7821**	**0.0621**	**0.0000**	**376.3348**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2781	2.1705	2.0468	4.3000e-003	0.1011	0.0921	0.1933	0.0302	0.0879	0.1181	0.0000	374.7817	374.7817	0.0621	0.0000	376.3345
2023	0.1822	5.9300e-003	8.9200e-003	2.0000e-005	3.9000e-004	3.2000e-004	7.1000e-004	1.0000e-004	3.2000e-004	4.2000e-004	0.0000	1.4391	1.4391	7.0000e-005	0.0000	1.4409
Maximum	**0.2781**	**2.1705**	**2.0468**	**4.3000e-003**	**0.1011**	**0.0921**	**0.1933**	**0.0302**	**0.0879**	**0.1181**	**0.0000**	**374.7817**	**374.7817**	**0.0621**	**0.0000**	**376.3345**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-3-2022**	**4-2-2022**	0.6363	0.6363
2	**4-3-2022**	**7-2-2022**	0.6093	0.6093

3	**7-3-2022**	**10-2-2022**	0.6161	0.6161
4	**10-3-2022**	**1-2-2023**	0.6113	0.6113
5	**1-3-2023**	**4-2-2023**	0.1493	0.1493
		Highest	0.6363	0.6363

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	0.1630	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-003
Energy	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	63.6056	63.6056	4.6500e-003	1.6100e-003	64.2013
Mobile	0.1995	0.5264	1.9774	6.5600e-003	0.6442	5.4600e-003	0.6496	0.1731	5.0800e-003	0.1782	0.0000	601.5052	601.5052	0.0223	0.0000	602.0628
Waste						0.0000	0.0000		0.0000	0.0000	40.0400	0.0000	40.0400	2.3663	0.0000	99.1973
Water						0.0000	0.0000		0.0000	0.0000	0.7376	1.0938	1.8314	2.7600e-003	1.6500e-003	2.3922
Total	**0.3670**	**0.5678**	**2.0152**	**6.8100e-003**	**0.6442**	**8.6100e-003**	**0.6528**	**0.1731**	**8.2300e-003**	**0.1814**	**40.7776**	**666.2105**	**706.9881**	**2.3960**	**3.2600e-003**	**767.8599**

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	0.1630	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-003
Energy	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	63.6056	63.6056	4.6500e-003	1.6100e-003	64.2013

Mobile	0.1995	0.5264	1.9774	6.5600e-003	0.6442	5.4600e-003	0.6496	0.1731	5.0800e-003	0.1782	0.0000	601.5052	601.5052	0.0223	0.0000	602.0628
Waste						0.0000	0.0000		0.0000	0.0000	40.0400	0.0000	40.0400	2.3663	0.0000	99.1973
Water						0.0000	0.0000		0.0000	0.0000	0.7376	1.0938	1.8314	2.7600e-003	1.6500e-003	2.3922
Total	**0.3670**	**0.5678**	**2.0152**	**6.8100e-003**	**0.6442**	**8.6100e-003**	**0.6528**	**0.1731**	**8.2300e-003**	**0.1814**	**40.7776**	**666.2105**	**706.9881**	**2.3960**	**3.2600e-003**	**767.8599**

	ROG	NOx	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	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/2/2022	5	3	
3	Grading	Grading	2/3/2022	2/10/2022	5	6	
4	Building Construction	Building Construction	2/11/2022	12/15/2022	5	220	
5	Paving	Paving	12/16/2022	12/29/2022	5	10	
6	Architectural Coating	Architectural Coating	12/30/2022	1/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 2.03

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 52,500; Non-Residential Outdoor: 17,500; 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	2	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
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
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	126.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	171.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	53.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0136	0.0000	0.0136	2.0600e-003	0.0000	2.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2120
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**0.0136**	**8.3800e-003**	**0.0220**	**2.0600e-003**	**7.8300e-003**	**9.8900e-003**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2120**

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	5.1000e-004	0.0172	9.0700e-003	5.0000e-005	1.0500e-003	5.0000e-005	1.1000e-003	2.9000e-004	5.0000e-005	3.4000e-004	0.0000	5.0854	5.0854	6.7000e-004	0.0000	5.1021
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	1.9000e-004	2.1700e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.7918	0.7918	1.0000e-005	0.0000	0.7922
Total	**8.2000e-004**	**0.0174**	**0.0112**	**6.0000e-005**	**2.0700e-003**	**6.0000e-005**	**2.1300e-003**	**5.6000e-004**	**6.0000e-005**	**6.2000e-004**	**0.0000**	**5.8772**	**5.8772**	**6.8000e-004**	**0.0000**	**5.8943**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0136	0.0000	0.0136	2.0600e-003	0.0000	2.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2119
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**0.0136**	**8.3800e-003**	**0.0220**	**2.0606e-003**	**7.8300e-003**	**9.8900e-003**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2119**

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	5.1000e-004	0.0172	9.0700e-003	5.0000e-005	1.0500e-003	5.0000e-005	1.1000e-003	2.9000e-004	5.0000e-005	3.4000e-004	0.0000	5.0854	5.0854	6.7000e-004	0.0000	5.1021
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	1.9000e-004	2.1700e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.7918	0.7918	1.0000e-005	0.0000	0.7922
Total	**8.2000e-004**	**0.0174**	**0.0112**	**6.0000e-005**	**2.0700e-003**	**6.0000e-005**	**2.1300e-003**	**5.6000e-004**	**6.0000e-005**	**6.2000e-004**	**0.0000**	**5.8772**	**5.8772**	**6.8000e-004**	**0.0000**	**5.8943**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0731	0.0731	0.0000	0.0000	0.0731
Total	**3.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0731**	**0.0731**	**0.0000**	**0.0000**	**0.0731**

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0731	0.0731	0.0000	0.0000	0.0731
Total	**3.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0731**	**0.0731**	**0.0000**	**0.0000**	**0.0731**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0197**	**2.2300e-003**	**0.0220**	**0.0101**	**2.0500e-003**	**0.0122**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

Unmitigated Construction Off-Site

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

Hauling	6.9000e-004	0.0234	0.0123	7.0000e-005	1.4300e-003	7.0000e-005	1.5000e-003	3.9000e-004	6.0000e-005	4.6000e-004	0.0000	6.9016	6.9016	9.1000e-004	0.0000	6.9243
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	4.0000e-005	5.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1827	0.1827	0.0000	0.0000	0.1828
Total	**7.6000e-004**	**0.0234**	**0.0128**	**7.0000e-005**	**1.6700e-003**	**7.0000e-005**	**1.7400e-003**	**4.5000e-004**	**6.0000e-005**	**5.2000e-004**	**0.0000**	**7.0844**	**7.0844**	**9.1000e-004**	**0.0000**	**7.1071**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0197**	**2.2300e-003**	**0.0220**	**0.0101**	**2.0500e-003**	**0.0122**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.9000e-004	0.0234	0.0123	7.0000e-005	1.4300e-003	7.0000e-005	1.5000e-003	3.9000e-004	6.0000e-005	4.6000e-004	0.0000	6.9016	6.9016	9.1000e-004	0.0000	6.9243
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	4.0000e-005	5.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1827	0.1827	0.0000	0.0000	0.1828
Total	**7.6000e-004**	**0.0234**	**0.0128**	**7.0000e-005**	**1.6700e-003**	**7.0000e-005**	**1.7400e-003**	**4.5000e-004**	**6.0000e-005**	**5.2000e-004**	**0.0000**	**7.0844**	**7.0844**	**9.1000e-004**	**0.0000**	**7.1071**

3.5 Building Construction - 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	0.2041	1.6064	1.5789	2.7500e-003		0.0772	0.0772		0.0740	0.0740	0.0000	228.4481	228.4481	0.0441	0.0000	229.5500
Total	**0.2041**	**1.6064**	**1.5789**	**2.7500e-003**		**0.0772**	**0.0772**		**0.0740**	**0.0740**	**0.0000**	**228.4481**	**228.4481**	**0.0441**	**0.0000**	**229.5500**

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	6.9300e-003	0.2263	0.1031	6.0000e-004	0.0151	4.9000e-004	0.0156	4.3600e-003	4.6000e-004	4.8200e-003	0.0000	59.6761	59.6761	5.1900e-003	0.0000	59.8058
Worker	0.0140	8.7200e-003	0.0975	3.9000e-004	0.0459	2.7000e-004	0.0462	0.0122	2.5000e-004	0.0125	0.0000	35.5097	35.5097	6.0000e-004	0.0000	35.5248
Total	**0.0210**	**0.2350**	**0.2006**	**9.9000e-004**	**0.0610**	**7.6000e-004**	**0.0617**	**0.0166**	**7.1000e-004**	**0.0173**	**0.0000**	**95.1857**	**95.1857**	**5.7900e-003**	**0.0000**	**95.3306**

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	0.2041	1.6064	1.5789	2.7500e-003		0.0772	0.0772		0.0740	0.0740	0.0000	228.4478	228.4478	0.0441	0.0000	229.5497
Total	**0.2041**	**1.6064**	**1.5789**	**2.7500e-003**		**0.0772**	**0.0772**		**0.0740**	**0.0740**	**0.0000**	**228.4478**	**228.4478**	**0.0441**	**0.0000**	**229.5497**

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	6.9300e-003	0.2263	0.1031	6.0000e-004	0.0151	4.9000e-004	0.0156	4.3600e-003	4.6000e-004	4.8200e-003	0.0000	59.6761	59.6761	5.1900e-003	0.0000	59.8058
Worker	0.0140	8.7200e-003	0.0975	3.9000e-004	0.0459	2.7000e-004	0.0462	0.0122	2.5000e-004	0.0125	0.0000	35.5097	35.5097	6.0000e-004	0.0000	35.5248
Total	**0.0210**	**0.2350**	**0.2006**	**9.9000e-004**	**0.0610**	**7.6000e-004**	**0.0617**	**0.0166**	**7.1000e-004**	**0.0173**	**0.0000**	**95.1857**	**95.1857**	**5.7900e-003**	**0.0000**	**95.3306**

3.6 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	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165

Paving	2.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.3700e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.1000e-004	1.2500e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4568	0.4568	1.0000e-005	0.0000	0.4570
Total	**1.8000e-004**	**1.1000e-004**	**1.2500e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4568**	**0.4568**	**1.0000e-005**	**0.0000**	**0.4570**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	2.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.3700e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.1000e-004	1.2500e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4568	0.4568	1.0000e-005	0.0000	0.4570
Total	**1.8000e-004**	**1.1000e-004**	**1.2500e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4568**	**0.4568**	**1.0000e-005**	**0.0000**	**0.4570**

3.7 Architectural Coating - 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					
Archit. Coating	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-004	7.0000e-004	9.1000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**0.0202**	**7.0000e-004**	**9.1000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0335	0.0335	0.0000	0.0000	0.0335
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0335**	**0.0335**	**0.0000**	**0.0000**	**0.0335**

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	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-004	7.0000e-004	9.1000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**0.0202**	**7.0000e-004**	**9.1000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0335	0.0335	0.0000	0.0000	0.0335
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0335**	**0.0335**	**0.0000**	**0.0000**	**0.0335**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1812					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	**0.1821**	**5.8600e-003**	**8.1500e-003**	**1.0000e-005**		**3.2000e-004**	**3.2000e-004**		**3.2000e-004**	**3.2000e-004**	**0.0000**	**1.1490**	**1.1490**	**7.0000e-005**	**0.0000**	**1.1507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	7.0000e-005	7.7000e-004	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.2901	0.2901	0.0000	0.0000	0.2902
Total	**1.1000e-004**	**7.0000e-005**	**7.7000e-004**	**0.0000**	**3.9000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.2901**	**0.2901**	**0.0000**	**0.0000**	**0.2902**

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	0.1812					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	**0.1821**	**5.8600e-003**	**8.1500e-003**	**1.0000e-005**		**3.2000e-004**	**3.2000e-004**		**3.2000e-004**	**3.2000e-004**	**0.0000**	**1.1490**	**1.1490**	**7.0000e-005**	**0.0000**	**1.1507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	7.0000e-005	7.7000e-004	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.2901	0.2901	0.0000	0.0000	0.2902
Total	**1.1000e-004**	**7.0000e-005**	**7.7000e-004**	**0.0000**	**3.9000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.2901**	**0.2901**	**0.0000**	**0.0000**	**0.2902**

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	0.1995	0.5264	1.9774	6.5600e-003	0.6442	5.4600e-003	0.6496	0.1731	5.0800e-003	0.1782	0.0000	601.5052	601.5052	0.0223	0.0000	602.0628
Unmitigated	0.1995	0.5264	1.9774	6.5600e-003	0.6442	5.4600e-003	0.6496	0.1731	5.0800e-003	0.1782	0.0000	601.5052	601.5052	0.0223	0.0000	602.0628

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Day-Care Center	294.48	25.92	25.20	256,306	256,306
Health Club	930.89	590.12	755.50	1,480,869	1,480,869
Parking Lot	0.00	0.00	0.00		
Total	1,225.37	616.04	780.70	1,737,175	1,737,175

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
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Day-Care Center	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808
Health Club	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808
Parking Lot	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808

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	18.5722	18.5722	3.7900e-003	7.8000e-004	18.9003
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	18.5722	18.5722	3.7900e-003	7.8000e-004	18.9003
NaturalGas Mitigated	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	45.0334	45.0334	8.6000e-004	8.3000e-004	45.3010
NaturalGas Unmitigated	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	45.0334	45.0334	8.6000e-004	8.3000e-004	45.3010

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					
Day-Care Center	44469	2.4000e-004	2.1800e-003	1.8300e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.3730	2.3730	5.0000e-005	4.0000e-005	2.3871
Health Club	799425	4.3100e-003	0.0392	0.0329	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.6604	42.6604	8.2000e-004	7.8000e-004	42.9139
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.5500e-003**	**0.0414**	**0.0348**	**2.5000e-004**		**3.1500e-003**	**3.1500e-003**		**3.1500e-003**	**3.1500e-003**	**0.0000**	**45.0334**	**45.0334**	**8.7000e-004**	**8.2000e-004**	**45.3010**

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					
Day-Care Center	44469	2.4000e-004	2.1800e-003	1.8300e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.3730	2.3730	5.0000e-005	4.0000e-005	2.3871
Health Club	799425	4.3100e-003	0.0392	0.0329	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.6604	42.6604	8.2000e-004	7.8000e-004	42.9139
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.5500e-003**	**0.0414**	**0.0348**	**2.5000e-004**		**3.1500e-003**	**3.1500e-003**		**3.1500e-003**	**3.1500e-003**	**0.0000**	**45.0334**	**45.0334**	**8.7000e-004**	**8.2000e-004**	**45.3010**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	11988	0.7736	1.6000e-004	3.0000e-005	0.7872
Health Club	244188	15.7570	3.2100e-003	6.6000e-004	16.0353
Parking Lot	31640	2.0417	4.2000e-004	9.0000e-005	2.0777
Total		**18.5722**	**3.7900e-003**	**7.8000e-004**	**18.9003**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	11988	0.7736	1.6000e-004	3.0000e-005	0.7872

Health Club	244188	15.7570	3.2100e-003	6.6000e-004	16.0353
Parking Lot	31640	2.0417	4.2000e-004	9.0000e-005	2.0777
Total		**18.5722**	**3.7900e-003**	**7.8000e-004**	**18.9003**

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	0.1630	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-003
Unmitigated	0.1630	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-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	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	2.8000e-004	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-003
Total	**0.1630**	**3.0000e-005**	**3.0300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.9000e-003**	**5.9000e-003**	**2.0000e-005**	**0.0000**	**6.2900e-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	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-003
Total	**0.1630**	**3.0000e-005**	**3.0300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.9000e-003**	**5.9000e-003**	**2.0000e-005**	**0.0000**	**6.2900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.8314	2.7600e-003	1.6500e-003	2.3922
Unmitigated	1.8314	2.7600e-003	1.6500e-003	2.3922

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.174545 / 0.448831	0.2241	2.5000e-004	1.4000e-004	0.2723
Health Club	1.91032 / 1.17084	1.6073	2.5200e-003	1.5100e-003	2.1199
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8314**	**2.7700e-003**	**1.6500e-003**	**2.3922**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.174545 / 0.448831	0.2241	2.5000e-004	1.4000e-004	0.2723
Health Club	1.91032 / 1.17084	1.6073	2.5200e-003	1.5100e-003	2.1199
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8314**	**2.7700e-003**	**1.6500e-003**	**2.3922**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	40.0400	2.3663	0.0000	99.1973
Unmitigated	40.0400	2.3663	0.0000	99.1973

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	13.14	2.6673	0.1576	0.0000	6.6081
Health Club	184.11	37.3727	2.2087	0.0000	92.5892
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**40.0400**	**2.3663**	**0.0000**	**99.1973**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Day-Care Center	13.14	2.6673	0.1576	0.0000	6.6081
Health Club	184.11	37.3727	2.2087	0.0000	92.5892
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**40.0400**	**2.3663**	**0.0000**	**99.1973**

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

Veterans Memorial - Existing - San Mateo County, Annual

Veterans Memorial - Existing

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Health Club	55.24	1000sqft	1.27	55,235.00	0
Parking Lot	78.00	1000sqft	1.79	78,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing land uses

Construction Phase - Existing use no construction

Off-road Equipment - Existing use no construction

Vehicle Trips - health club = 28.82, 18.27, 23.39

Energy Use - Exsiting = energy historical data use

Table Name	Column Name	Default Value	New Value

tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	PhaseEndDate	2/2/2024	1/29/2024
tblEnergyUse	LightingElect	3.70	2.99
tblEnergyUse	LightingElect	0.88	0.35
tblEnergyUse	T24E	1.59	1.21
tblEnergyUse	T24NG	20.06	17.85
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	0.00	18.00
tblVehicleTrips	ST_TR	20.87	18.27
tblVehicleTrips	SU_TR	26.73	23.39
tblVehicleTrips	WD_TR	32.93	28.82

2.0 Emissions Summary

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2024**	**3-31-2024**	0.0001	0.0001
		Highest	0.0001	0.0001

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Area	0.2513	1.0000e-005	1.2200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5400e-003
Energy	7.3700e-003	0.0670	0.0563	4.0000e-004		5.0900e-003	5.0900e-003		5.0900e-003	5.0900e-003	0.0000	202.3716	202.3716	7.2500e-003	2.5500e-003	203.3122
Mobile	0.2781	0.7424	2.8215	9.5300e-003	0.9390	7.8600e-003	0.9469	0.2524	7.3200e-003	0.2597	0.0000	873.6610	873.6610	0.0321	0.0000	874.4643
Waste						0.0000	0.0000		0.0000	0.0000	63.9036	0.0000	63.9036	3.7766	0.0000	158.3184
Water						0.0000	0.0000		0.0000	0.0000	1.0363	7.1803	8.2166	0.1068	2.5800e-003	11.6546
Total	**0.5368**	**0.8094**	**2.8790**	**9.9300e-003**	**0.9390**	**0.0130**	**0.9520**	**0.2524**	**0.0124**	**0.2648**	**64.9399**	**1,083.2152**	**1,148.1551**	**3.9227**	**5.1300e-003**	**1,247.7521**

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	0.2513	1.0000e-005	1.2200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5400e-003
Energy	7.3700e-003	0.0670	0.0563	4.0000e-004		5.0900e-003	5.0900e-003		5.0900e-003	5.0900e-003	0.0000	202.3716	202.3716	7.2500e-003	2.5500e-003	203.3122
Mobile	0.2781	0.7424	2.8215	9.5300e-003	0.9390	7.8600e-003	0.9469	0.2524	7.3200e-003	0.2597	0.0000	873.6610	873.6610	0.0321	0.0000	874.4643
Waste						0.0000	0.0000		0.0000	0.0000	63.9036	0.0000	63.9036	3.7766	0.0000	158.3184
Water						0.0000	0.0000		0.0000	0.0000	1.0363	7.1803	8.2166	0.1068	2.5800e-003	11.6546
Total	**0.5368**	**0.8094**	**2.8790**	**9.9300e-003**	**0.9390**	**0.0130**	**0.9520**	**0.2524**	**0.0124**	**0.2648**	**64.9399**	**1,083.2152**	**1,148.1551**	**3.9227**	**5.1300e-003**	**1,247.7521**

	ROG	NOx	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**

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	0.2781	0.7424	2.8215	9.5300e-003	0.9390	7.8600e-003	0.9469	0.2524	7.3200e-003	0.2597	0.0000	873.6610	873.6610	0.0321	0.0000	874.4643
Unmitigated	0.2781	0.7424	2.8215	9.5300e-003	0.9390	7.8600e-003	0.9469	0.2524	7.3200e-003	0.2597	0.0000	873.6610	873.6610	0.0321	0.0000	874.4643

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	1,591.87	1,009.14	1291.95	2,532,377	2,532,377
Parking Lot	0.00	0.00	0.00		
Total	1,591.87	1,009.14	1,291.95	2,532,377	2,532,377

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
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH

Health Club	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808
Parking Lot	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808

5.0 Energy Detail

Historical Energy Use: Y

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	129.4197	129.4197	5.8500e-003	1.2100e-003	129.9268
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	129.4197	129.4197	5.8500e-003	1.2100e-003	129.9268
NaturalGas Mitigated	7.3700e-003	0.0670	0.0563	4.0000e-004		5.0900e-003	5.0900e-003		5.0900e-003	5.0900e-003	0.0000	72.9519	72.9519	1.4000e-003	1.3400e-003	73.3854
NaturalGas Unmitigated	7.3700e-003	0.0670	0.0563	4.0000e-004		5.0900e-003	5.0900e-003		5.0900e-003	5.0900e-003	0.0000	72.9519	72.9519	1.4000e-003	1.3400e-003	73.3854

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					
Health Club	1.36707e+006	7.3700e-003	0.0670	0.0563	4.0000e-004		5.0900e-003	5.0900e-003		5.0900e-003	5.0900e-003	0.0000	72.9519	72.9519	1.4000e-003	1.3400e-003	73.3854
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total		**7.3700e-003**	**0.0670**	**0.0563**	**4.0000e-004**		**5.0900e-003**	**5.0900e-003**		**5.0900e-003**	**5.0900e-003**	**0.0000**	**72.9519**	**72.9519**	**1.4000e-003**	**1.3400e-003**	**73.3854**

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					
Health Club	1.36707e+006	7.3700e-003	0.0670	0.0563	4.0000e-004		5.0900e-003	5.0900e-003		5.0900e-003	5.0900e-003	0.0000	72.9519	72.9519	1.4000e-003	1.3400e-003	73.3854
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.3700e-003**	**0.0670**	**0.0563**	**4.0000e-004**		**5.0900e-003**	**5.0900e-003**		**5.0900e-003**	**5.0900e-003**	**0.0000**	**72.9519**	**72.9519**	**1.4000e-003**	**1.3400e-003**	**73.3854**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	417577	121.4778	5.4900e-003	1.1400e-003	121.9538
Parking Lot	27300	7.9419	3.6000e-004	7.0000e-005	7.9730
Total		**129.4197**	**5.8500e-003**	**1.2100e-003**	**129.9268**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	417577	121.4778	5.4900e-003	1.1400e-003	121.9538
Parking Lot	27300	7.9419	3.6000e-004	7.0000e-005	7.9730
Total		**129.4197**	**5.8500e-003**	**1.2100e-003**	**129.9268**

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	0.2513	1.0000e-005	1.2200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5400e-003
Unmitigated	0.2513	1.0000e-005	1.2200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5400e-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	0.0304					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5400e-003
Total	**0.2513**	**1.0000e-005**	**1.2200e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.3800e-003**	**2.3800e-003**	**1.0000e-005**	**0.0000**	**2.5400e-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	0.0304					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5400e-003
Total	**0.2513**	**1.0000e-005**	**1.2200e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.3800e-003**	**2.3800e-003**	**1.0000e-005**	**0.0000**	**2.5400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.2166	0.1068	2.5800e-003	11.6546

Unmitigated	8.2166	0.1068	2.5800e-003	11.6546

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	3.26648 / 2.00203	8.2166	0.1068	2.5800e-003	11.6546
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**8.2166**	**0.1068**	**2.5800e-003**	**11.6546**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	3.26648 / 2.00203	8.2166	0.1068	2.5800e-003	11.6546
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**8.2166**	**0.1068**	**2.5800e-003**	**11.6546**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	63.9036	3.7766	0.0000	158.3184
Unmitigated	63.9036	3.7766	0.0000	158.3184

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	314.81	63.9036	3.7766	0.0000	158.3184
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**63.9036**	**3.7766**	**0.0000**	**158.3184**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Health Club	314.81	63.9036	3.7766	0.0000	158.3184
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**63.9036**	**3.7766**	**0.0000**	**158.3184**

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

Veterans Memorial - Senior Center Phase 1 - San Mateo County, Annual

Veterans Memorial - Senior Center Phase 1 - Construction

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	57.00	Space	0.51	22,800.00	0
Health Club	45.00	1000sqft	1.03	45,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2022
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	142.26	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy 2017 CO2 Rate = 142.26

Land Use - Applicant provided land uses, default acreage

Construction Phase - Default construction schedule

Off-road Equipment - Default constructoin equipment

Demolition - Existing building 55,235sf / 2 = 27,617.5sf building demo

Vehicle Trips - health club = 28.82, 18.27, 23.39

Energy Use -

Water And Wastewater - WTP Treatment, 100% aerobic

Mobile Land Use Mitigation - Traffic Calming measures 25% reduction

Energy Mitigation - effecient LED lighting

Water Mitigation - Water conservation measures, on-site storage and low flow

Trips and VMT - 1 Mile Trips

Construction Off-road Equipment Mitigation - BMPs, Tier 3 DPF 3 Mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	142.26
tblProjectCharacteristics	N2OIntensityFactor	0	0.006
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00

tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblVehicleTrips	ST_TR	20.87	18.27
tblVehicleTrips	SU_TR	26.73	23.39
tblVehicleTrips	WD_TR	32.93	28.82
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					
2020	0.4789	1.8653	1.5850	2.6800e-003	0.0325	0.0964	0.1289	0.0110	0.0925	0.1035	0.0000	224.3410	224.3410	0.0433	0.0000	225.4244
Maximum	**0.4789**	**1.8653**	**1.5850**	**2.6800e-003**	**0.0325**	**0.0964**	**0.1289**	**0.0110**	**0.0925**	**0.1035**	**0.0000**	**224.3410**	**224.3410**	**0.0433**	**0.0000**	**225.4244**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3176	1.4688	1.6319	2.6800e-003	0.0165	0.0127	0.0292	3.1800e-003	0.0127	0.0159	0.0000	224.3408	224.3408	0.0433	0.0000	225.4242
Maximum	**0.3176**	**1.4688**	**1.6319**	**2.6800e-003**	**0.0165**	**0.0127**	**0.0292**	**3.1800e-003**	**0.0127**	**0.0159**	**0.0000**	**224.3408**	**224.3408**	**0.0433**	**0.0000**	**225.4242**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**33.69**	**21.26**	**-2.96**	**0.00**	**49.40**	**86.79**	**77.36**	**71.01**	**86.25**	**84.64**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2020**	**3-31-2020**	0.6318	0.4195
2	**4-1-2020**	**6-30-2020**	0.5715	0.4382
3	**7-1-2020**	**9-30-2020**	0.5778	0.4430
		Highest	0.6318	0.4430

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	1/30/2020	5	2	
3	Grading	Grading	1/31/2020	2/5/2020	5	4	
4	Building Construction	Building Construction	2/6/2020	11/11/2020	5	200	
5	Paving	Paving	11/12/2020	11/25/2020	5	10	

6	Architectural Coating	Architectural Coating	11/26/2020	12/9/2020	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0.51

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 67,500; Non-Residential Outdoor: 22,500; 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	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	126.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	28.00	11.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0136	0.0000	0.0136	2.0600e-003	0.0000	2.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0213	0.2095	0.1466	2.4000e-004		0.0115	0.0115		0.0108	0.0108	0.0000	21.0677	21.0677	5.4200e-003	0.0000	21.2031
Total	**0.0213**	**0.2095**	**0.1466**	**2.4000e-004**	**0.0136**	**0.0115**	**0.0251**	**2.0600e-003**	**0.0108**	**0.0128**	**0.0000**	**21.0677**	**21.0677**	**5.4200e-003**	**0.0000**	**21.2031**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3000e-004	6.1700e-003	1.9300e-003	1.0000e-005	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.6693	0.6693	8.0000e-005	0.0000	0.6713
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	5.0000e-005	7.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1020	0.1020	0.0000	0.0000	0.1021
Total	**2.4000e-004**	**6.2200e-003**	**2.6300e-003**	**1.0000e-005**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.7712**	**0.7712**	**8.0000e-005**	**0.0000**	**0.7733**

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					6.1200e-003	0.0000	6.1200e-003	4.6000e-004	0.0000	4.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	21.0676	21.0676	5.4200e-003	0.0000	21.2030
Total	**5.6200e-003**	**0.1210**	**0.1542**	**2.4000e-004**	**6.1200e-003**	**1.0800e-003**	**7.2000e-003**	**4.6000e-004**	**1.0800e-003**	**1.5400e-003**	**0.0000**	**21.0676**	**21.0676**	**5.4200e-003**	**0.0000**	**21.2030**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	1.3000e-004	6.1700e-003	1.9300e-003	1.0000e-005	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.6693	0.6693	8.0000e-005	0.0000	0.6713
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	5.0000e-005	7.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1020	0.1020	0.0000	0.0000	0.1021
Total	**2.4000e-004**	**6.2200e-003**	**2.6300e-003**	**1.0000e-005**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.7712**	**0.7712**	**8.0000e-005**	**0.0000**	**0.7733**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
Total	**1.6300e-003**	**0.0184**	**7.7100e-003**	**2.0000e-005**	**5.8000e-003**	**8.2000e-004**	**6.6200e-003**	**2.9500e-003**	**7.6000e-004**	**3.7100e-003**	**0.0000**	**1.5127**	**1.5127**	**4.9000e-004**	**0.0000**	**1.5249**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	0.0000	4.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	6.2800e-003	6.2800e-003	0.0000	0.0000	6.2800e-003

Total	**1.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.2800e-003**	**6.2800e-003**	**0.0000**	**0.0000**	**6.2800e-003**

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					2.6100e-003	0.0000	2.6100e-003	6.6000e-004	0.0000	6.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2000e-004	8.4100e-003	9.8200e-003	2.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
Total	**4.2000e-004**	**8.4100e-003**	**9.8200e-003**	**2.0000e-005**	**2.6100e-003**	**6.0000e-005**	**2.6700e-003**	**6.6000e-004**	**6.0000e-005**	**7.2000e-004**	**0.0000**	**1.5127**	**1.5127**	**4.9000e-004**	**0.0000**	**1.5249**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	0.0000	4.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	6.2800e-003	6.2800e-003	0.0000	0.0000	6.2800e-003
Total	**1.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.2800e-003**	**6.2800e-003**	**0.0000**	**0.0000**	**6.2800e-003**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980
Total	**2.7000e-003**	**0.0302**	**0.0129**	**3.0000e-005**	**9.8300e-003**	**1.3700e-003**	**0.0112**	**5.0500e-003**	**1.2600e-003**	**6.3100e-003**	**0.0000**	**2.4779**	**2.4779**	**8.0000e-004**	**0.0000**	**2.4980**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0126**	**0.0126**	**0.0000**	**0.0000**	**0.0126**

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					4.4200e-003	0.0000	4.4200e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9000e-004	0.0138	0.0162	3.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980
Total	**6.9000e-004**	**0.0138**	**0.0162**	**3.0000e-005**	**4.4200e-003**	**9.0000e-005**	**4.5100e-003**	**1.1400e-003**	**9.0000e-005**	**1.2300e-003**	**0.0000**	**2.4779**	**2.4779**	**8.0000e-004**	**0.0000**	**2.4980**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0126**	**0.0126**	**0.0000**	**0.0000**	**0.0126**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2031	1.4788	1.3188	2.2000e-003		0.0796	0.0796		0.0769	0.0769	0.0000	181.5421	181.5421	0.0337	0.0000	182.3847
Total	**0.2031**	**1.4788**	**1.3188**	**2.2000e-003**		**0.0796**	**0.0796**		**0.0769**	**0.0769**	**0.0000**	**181.5421**	**181.5421**	**0.0337**	**0.0000**	**182.3847**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9700e-003	0.0705	0.0272	7.0000e-005	1.0100e-003	1.3000e-004	1.1400e-003	2.9000e-004	1.3000e-004	4.2000e-004	0.0000	7.5199	7.5199	8.0000e-004	0.0000	7.5399
Worker	2.4600e-003	1.1400e-003	0.0151	2.0000e-005	2.0700e-003	3.0000e-005	2.0900e-003	5.5000e-004	3.0000e-005	5.8000e-004	0.0000	2.1967	2.1967	8.0000e-005	0.0000	2.1986
Total	**4.4300e-003**	**0.0716**	**0.0422**	**9.0000e-005**	**3.0800e-003**	**1.6000e-004**	**3.2300e-003**	**8.4000e-004**	**1.6000e-004**	**1.0000e-003**	**0.0000**	**9.7166**	**9.7166**	**8.8000e-004**	**0.0000**	**9.7385**

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	0.0641	1.2077	1.3479	2.2000e-003		0.0110	0.0110		0.0110	0.0110	0.0000	181.5419	181.5419	0.0337	0.0000	182.3844
Total	**0.0641**	**1.2077**	**1.3479**	**2.2000e-003**		**0.0110**	**0.0110**		**0.0110**	**0.0110**	**0.0000**	**181.5419**	**181.5419**	**0.0337**	**0.0000**	**182.3844**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9700e-003	0.0705	0.0272	7.0000e-005	1.0100e-003	1.3000e-004	1.1400e-003	2.9000e-004	1.3000e-004	4.2000e-004	0.0000	7.5199	7.5199	8.0000e-004	0.0000	7.5399
Worker	2.4600e-003	1.1400e-003	0.0151	2.0000e-005	2.0700e-003	3.0000e-005	2.0900e-003	5.5000e-004	3.0000e-005	5.8000e-004	0.0000	2.1967	2.1967	8.0000e-005	0.0000	2.1986
Total	**4.4300e-003**	**0.0716**	**0.0422**	**9.0000e-005**	**3.0800e-003**	**1.6000e-004**	**3.2300e-003**	**8.4000e-004**	**1.6000e-004**	**1.0000e-003**	**0.0000**	**9.7166**	**9.7166**	**8.8000e-004**	**0.0000**	**9.7385**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8829	5.8829	1.8600e-003	0.0000	5.9295
Paving	6.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.8700e-003**	**0.0423**	**0.0444**	**7.0000e-005**		**2.3500e-003**	**2.3500e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**5.8829**	**5.8829**	**1.8600e-003**	**0.0000**	**5.9295**

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	6.0000e-005	3.0000e-005	3.5000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0510	0.0510	0.0000	0.0000	0.0510

Total	**6.0000e-005**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0510**	**0.0510**	**0.0000**	**0.0000**	**0.0510**

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	1.6000e-003	0.0332	0.0493	7.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	5.8828	5.8828	1.8600e-003	0.0000	5.9295
Paving	6.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.2700e-003**	**0.0332**	**0.0493**	**7.0000e-005**		**2.9000e-004**	**2.9000e-004**		**2.9000e-004**	**2.9000e-004**	**0.0000**	**5.8828**	**5.8828**	**1.8600e-003**	**0.0000**	**5.9295**

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	6.0000e-005	3.0000e-005	3.5000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0510	0.0510	0.0000	0.0000	0.0510
Total	**6.0000e-005**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0510**	**0.0510**	**0.0000**	**0.0000**	**0.0510**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2394					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.2406**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	1.0000e-005	1.6000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0235	0.0235	0.0000	0.0000	0.0236
Total	**3.0000e-005**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0235**	**0.0235**	**0.0000**	**0.0000**	**0.0236**

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	0.2394					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	1.0000e-004	0.0000	1.2791
Total	**0.2397**	**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**	**1.0000e-004**	**0.0000**	**1.2791**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	1.0000e-005	1.6000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0235	0.0235	0.0000	0.0000	0.0236
Total	**3.0000e-005**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0235**	**0.0235**	**0.0000**	**0.0000**	**0.0236**

Veterans Memorial - YMCA Phase 2

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Day-Care Center	72.00	Student	0.09	2,700.00	0
Parking Lot	226.00	Space	2.03	90,400.00	0
Health Club	32.30	1000sqft	0.74	32,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2024
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	142.26	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy 2017 CO2 Rate = 142.26

Land Use - Applicant provided land uses, default acreage

Construction Phase - Default construction schedule

Off-road Equipment - Default constructoin equipment

Demolition - Existing building 55,235sf / 2 = 27,617.5sf building demo

Vehicle Trips - health club = 28.82, 18.27, 23.39, daycare = 4.09, 0.36, 0.35

Energy Use -

Water And Wastewater - WTP Treatment, 100% aerobic

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Grading - 1,365cy export

Trips and VMT - 1 Mile trips

Construction Off-road Equipment Mitigation - BMPs, Tier 3 DPF 3 Mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblGrading	MaterialExported	0.00	1,365.00
tblLandUse	LandUseSquareFeet	4,069.64	2,700.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	142.26
tblProjectCharacteristics	N2OIntensityFactor	0	0.006
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00

tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblVehicleTrips	ST_TR	0.39	0.36
tblVehicleTrips	ST_TR	20.87	18.27
tblVehicleTrips	SU_TR	0.37	0.35
tblVehicleTrips	SU_TR	26.73	23.39
tblVehicleTrips	WD_TR	4.38	4.09
tblVehicleTrips	WD_TR	32.93	28.82
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2635	2.0432	1.9070	3.4000e-003	0.0424	0.0914	0.1339	0.0143	0.0872	0.1015	0.0000	287.3585	287.3585	0.0565	0.0000	288.7714
2023	0.1821	5.8800e-003	8.3500e-003	1.0000e-005	4.0000e-005	3.2000e-004	3.6000e-004	1.0000e-005	3.2000e-004	3.3000e-004	0.0000	1.1838	1.1838	7.0000e-005	0.0000	1.1855
Maximum	**0.2635**	**2.0432**	**1.9070**	**3.4000e-003**	**0.0424**	**0.0914**	**0.1339**	**0.0143**	**0.0872**	**0.1015**	**0.0000**	**287.3585**	**287.3585**	**0.0565**	**0.0000**	**288.7714**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1197	1.8616	2.0581	3.4000e-003	0.0228	0.0155	0.0383	4.6500e-003	0.0155	0.0202	0.0000	287.3582	287.3582	0.0565	0.0000	288.7710
2023	0.1815	6.1200e-003	8.4500e-003	1.0000e-005	4.0000e-005	6.0000e-005	1.0000e-004	1.0000e-005	6.0000e-005	7.0000e-005	0.0000	1.1838	1.1838	7.0000e-005	0.0000	1.1855
Maximum	**0.1815**	**1.8616**	**2.0581**	**3.4000e-003**	**0.0228**	**0.0155**	**0.0383**	**4.6500e-003**	**0.0155**	**0.0202**	**0.0000**	**287.3582**	**287.3582**	**0.0565**	**0.0000**	**288.7710**

	ROG	NOx	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	**32.40**	**8.85**	**-7.90**	**0.00**	**46.23**	**83.03**	**71.38**	**67.39**	**82.23**	**80.15**	**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	**1-3-2022**	**4-2-2022**	0.5893	0.4678
2	**4-3-2022**	**7-2-2022**	0.5775	0.5085

3	**7-3-2022**	**10-2-2022**	0.5839	0.5141
4	**10-3-2022**	**1-2-2023**	0.5830	0.5217
5	**1-3-2023**	**4-2-2023**	0.1492	0.1489
		Highest	0.5893	0.5217

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	0.1630	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-003
Energy	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	63.6056	63.6056	4.6500e-003	1.6100e-003	64.2013
Mobile	0.1995	0.5264	1.9774	6.5600e-003	0.6442	5.4600e-003	0.6496	0.1731	5.0800e-003	0.1782	0.0000	601.5052	601.5052	0.0223	0.0000	602.0628
Waste						0.0000	0.0000		0.0000	0.0000	40.0400	0.0000	40.0400	2.3663	0.0000	99.1973
Water						0.0000	0.0000		0.0000	0.0000	0.7376	1.0938	1.8314	2.7600e-003	1.6500e-003	2.3922
Total	**0.3670**	**0.5678**	**2.0152**	**6.8100e-003**	**0.6442**	**8.6100e-003**	**0.6528**	**0.1731**	**8.2300e-003**	**0.1814**	**40.7776**	**666.2105**	**706.9881**	**2.3960**	**3.2600e-003**	**767.8599**

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	0.1630	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-003
Energy	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	63.6056	63.6056	4.6500e-003	1.6100e-003	64.2013

Mobile	0.1995	0.5264	1.9774	6.5600e-003	0.6442	5.4600e-003	0.6496	0.1731	5.0800e-003	0.1782	0.0000	601.5052	601.5052	0.0223	0.0000	602.0628
Waste						0.0000	0.0000		0.0000	0.0000	40.0400	0.0000	40.0400	2.3663	0.0000	99.1973
Water						0.0000	0.0000		0.0000	0.0000	0.7376	1.0938	1.8314	2.7600e-003	1.6500e-003	2.3922
Total	**0.3670**	**0.5678**	**2.0152**	**6.8100e-003**	**0.6442**	**8.6100e-003**	**0.6528**	**0.1731**	**8.2300e-003**	**0.1814**	**40.7776**	**666.2105**	**706.9881**	**2.3960**	**3.2600e-003**	**767.8599**

	ROG	NOx	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	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/2/2022	5	3	
3	Grading	Grading	2/3/2022	2/10/2022	5	6	
4	Building Construction	Building Construction	2/11/2022	12/15/2022	5	220	
5	Paving	Paving	12/16/2022	12/29/2022	5	10	
6	Architectural Coating	Architectural Coating	12/30/2022	1/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 2.03

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 52,500; Non-Residential Outdoor: 17,500; 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	2	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
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
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	126.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	171.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	53.00	21.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0136	0.0000	0.0136	2.0600e-003	0.0000	2.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2120
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**0.0136**	**8.3800e-003**	**0.0220**	**2.0600e-003**	**7.8300e-003**	**9.8900e-003**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2120**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2000e-004	5.5800e-003	2.0300e-003	1.0000e-005	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.6456	0.6456	7.0000e-005	0.0000	0.6475
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	4.0000e-005	5.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0949	0.0949	0.0000	0.0000	0.0950

Total	**2.2000e-004**	**5.6200e-003**	**2.6100e-003**	**1.0000e-005**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.7405**	**0.7405**	**7.0000e-005**	**0.0000**	**0.7424**

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					6.1200e-003	0.0000	6.1200e-003	4.6000e-004	0.0000	4.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	21.0777	21.0777	5.3700e-003	0.0000	21.2119
Total	**5.6200e-003**	**0.1210**	**0.1542**	**2.4000e-004**	**6.1200e-003**	**1.0800e-003**	**7.2000e-003**	**4.6000e-004**	**1.0800e-003**	**1.5400e-003**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2119**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2000e-004	5.5800e-003	2.0300e-003	1.0000e-005	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.6456	0.6456	7.0000e-005	0.0000	0.6475
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	4.0000e-005	5.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0949	0.0949	0.0000	0.0000	0.0950
Total	**2.2000e-004**	**5.6200e-003**	**2.6100e-003**	**1.0000e-005**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.7405**	**0.7405**	**7.0000e-005**	**0.0000**	**0.7424**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	0.0000	5.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	8.7600e-003	8.7600e-003	0.0000	0.0000	8.7700e-003
Total	**1.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**8.7600e-003**	**8.7600e-003**	**0.0000**	**0.0000**	**8.7700e-003**

Mitigated Construction On-Site

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

Fugitive Dust					1.0700e-003	0.0000	1.0700e-003	6.0000e-005	0.0000	6.0000e-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	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**9.0000e-004**	**0.0178**	**0.0205**	**4.0000e-005**	**1.0700e-003**	**1.1000e-004**	**1.1800e-003**	**6.0000e-005**	**1.1000e-004**	**1.7000e-004**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	0.0000	5.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	8.7600e-003	8.7600e-003	0.0000	0.0000	8.7700e-003
Total	**1.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**8.7600e-003**	**8.7600e-003**	**0.0000**	**0.0000**	**8.7700e-003**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0197**	**2.2300e-003**	**0.0220**	**0.0101**	**2.0500e-003**	**0.0122**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.5700e-003	2.7600e-003	1.0000e-005	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.8762	0.8762	1.0000e-004	0.0000	0.8787
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.3000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0219	0.0219	0.0000	0.0000	0.0219
Total	**1.8000e-004**	**7.5800e-003**	**2.8900e-003**	**1.0000e-005**	**9.0000e-005**	**1.0000e-005**	**1.0000e-004**	**3.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.8981**	**0.8981**	**1.0000e-004**	**0.0000**	**0.9006**

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					8.8800e-003	0.0000	8.8800e-003	2.2800e-003	0.0000	2.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5100e-003	0.0307	0.0364	6.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**1.5100e-003**	**0.0307**	**0.0364**	**6.0000e-005**	**8.8800e-003**	**2.2000e-004**	**9.1000e-003**	**2.2800e-003**	**2.2000e-004**	**2.5000e-003**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.5700e-003	2.7600e-003	1.0000e-005	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.8762	0.8762	1.0000e-004	0.0000	0.8787
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.3000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0219	0.0219	0.0000	0.0000	0.0219
Total	**1.8000e-004**	**7.5800e-003**	**2.8900e-003**	**1.0000e-005**	**9.0000e-005**	**1.0000e-005**	**1.0000e-004**	**3.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.8981**	**0.8981**	**1.0000e-004**	**0.0000**	**0.9006**

3.5 Building Construction - 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	0.2041	1.6064	1.5789	2.7500e-003		0.0772	0.0772		0.0740	0.0740	0.0000	228.4481	228.4481	0.0441	0.0000	229.5500
Total	**0.2041**	**1.6064**	**1.5789**	**2.7500e-003**		**0.0772**	**0.0772**		**0.0740**	**0.0740**	**0.0000**	**228.4481**	**228.4481**	**0.0441**	**0.0000**	**229.5500**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4400e-003	0.1337	0.0544	1.5000e-004	2.1100e-003	1.3000e-004	2.2500e-003	6.2000e-004	1.3000e-004	7.4000e-004	0.0000	15.3249	15.3249	1.5000e-003	0.0000	15.3623
Worker	4.3100e-003	1.8600e-003	0.0260	5.0000e-005	4.3000e-003	6.0000e-005	4.3600e-003	1.1500e-003	5.0000e-005	1.2000e-003	0.0000	4.2560	4.2560	1.3000e-004	0.0000	4.2592

Total	**7.7500e-003**	**0.1355**	**0.0804**	**2.0000e-004**	**6.4100e-003**	**1.9000e-004**	**6.6100e-003**	**1.7700e-003**	**1.8000e-004**	**1.9400e-003**	**0.0000**	**19.5809**	**19.5809**	**1.6300e-003**	**0.0000**	**19.6215**

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	228.4478	228.4478	0.0441	0.0000	229.5497
Total	**0.0785**	**1.4984**	**1.6949**	**2.7500e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**228.4478**	**228.4478**	**0.0441**	**0.0000**	**229.5497**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4400e-003	0.1337	0.0544	1.5000e-004	2.1100e-003	1.3000e-004	2.2500e-003	6.2000e-004	1.3000e-004	7.4000e-004	0.0000	15.3249	15.3249	1.5000e-003	0.0000	15.3623
Worker	4.3100e-003	1.8600e-003	0.0260	5.0000e-005	4.3000e-003	6.0000e-005	4.3600e-003	1.1500e-003	5.0000e-005	1.2000e-003	0.0000	4.2560	4.2560	1.3000e-004	0.0000	4.2592
Total	**7.7500e-003**	**0.1355**	**0.0804**	**2.0000e-004**	**6.4100e-003**	**1.9000e-004**	**6.6100e-003**	**1.7700e-003**	**1.8000e-004**	**1.9400e-003**	**0.0000**	**19.5809**	**19.5809**	**1.6300e-003**	**0.0000**	**19.6215**

3.6 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	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	2.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.3700e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

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	6.0000e-005	2.0000e-005	3.3000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0548	0.0548	0.0000	0.0000	0.0548
Total	**6.0000e-005**	**2.0000e-005**	**3.3000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0548**	**0.0548**	**0.0000**	**0.0000**	**0.0548**

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-003	0.0443	0.0649	9.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	2.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7600e-003**	**0.0443**	**0.0649**	**9.0000e-005**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

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	6.0000e-005	2.0000e-005	3.3000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0548	0.0548	0.0000	0.0000	0.0548
Total	**6.0000e-005**	**2.0000e-005**	**3.3000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0548**	**0.0548**	**0.0000**	**0.0000**	**0.0548**

3.7 Architectural Coating - 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					
Archit. Coating	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-004	7.0000e-004	9.1000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**0.0202**	**7.0000e-004**	**9.1000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.0200e-003	4.0200e-003	0.0000	0.0000	4.0200e-003
Total	**0.0000**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**4.0200e-003**	**4.0200e-003**	**0.0000**	**0.0000**	**4.0200e-003**

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	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-005	6.8000e-004	9.2000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**0.0202**	**6.8000e-004**	**9.2000e-004**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.0200e-003	4.0200e-003	0.0000	0.0000	4.0200e-003
Total	**0.0000**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**4.0200e-003**	**4.0200e-003**	**0.0000**	**0.0000**	**4.0200e-003**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1812					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	**0.1821**	**5.8600e-003**	**8.1500e-003**	**1.0000e-005**		**3.2000e-004**	**3.2000e-004**		**3.2000e-004**	**3.2000e-004**	**0.0000**	**1.1490**	**1.1490**	**7.0000e-005**	**0.0000**	**1.1507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	1.0000e-005	2.0000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0348	0.0348	0.0000	0.0000	0.0348

Total	**3.0000e-005**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0348**	**0.0348**	**0.0000**	**0.0000**	**0.0348**

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	0.1812					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	6.1100e-003	8.2500e-003	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	**0.1815**	**6.1100e-003**	**8.2500e-003**	**1.0000e-005**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**1.1490**	**1.1490**	**7.0000e-005**	**0.0000**	**1.1507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	1.0000e-005	2.0000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0348	0.0348	0.0000	0.0000	0.0348
Total	**3.0000e-005**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0348**	**0.0348**	**0.0000**	**0.0000**	**0.0348**

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	0.1995	0.5264	1.9774	6.5600e-003	0.6442	5.4600e-003	0.6496	0.1731	5.0800e-003	0.1782	0.0000	601.5052	601.5052	0.0223	0.0000	602.0628
Unmitigated	0.1995	0.5264	1.9774	6.5600e-003	0.6442	5.4600e-003	0.6496	0.1731	5.0800e-003	0.1782	0.0000	601.5052	601.5052	0.0223	0.0000	602.0628

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Day-Care Center	294.48	25.92	25.20	256,306	256,306
Health Club	930.89	590.12	755.50	1,480,869	1,480,869
Parking Lot	0.00	0.00	0.00		
Total	1,225.37	616.04	780.70	1,737,175	1,737,175

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
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Day-Care Center	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808
Health Club	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808
Parking Lot	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808

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	18.5722	18.5722	3.7900e-003	7.8000e-004	18.9003
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	18.5722	18.5722	3.7900e-003	7.8000e-004	18.9003
NaturalGas Mitigated	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	45.0334	45.0334	8.6000e-004	8.3000e-004	45.3010
NaturalGas Unmitigated	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	45.0334	45.0334	8.6000e-004	8.3000e-004	45.3010

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					
Day-Care Center	44469	2.4000e-004	2.1800e-003	1.8300e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.3730	2.3730	5.0000e-005	4.0000e-005	2.3871
Health Club	799425	4.3100e-003	0.0392	0.0329	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.6604	42.6604	8.2000e-004	7.8000e-004	42.9139
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total		**4.5500e-003**	**0.0414**	**0.0348**	**2.5000e-004**		**3.1500e-003**	**3.1500e-003**		**3.1500e-003**	**3.1500e-003**	**0.0000**	**45.0334**	**45.0334**	**8.7000e-004**	**8.2000e-004**	**45.3010**

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					
Day-Care Center	44469	2.4000e-004	2.1800e-003	1.8300e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.3730	2.3730	5.0000e-005	4.0000e-005	2.3871
Health Club	799425	4.3100e-003	0.0392	0.0329	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.6604	42.6604	8.2000e-004	7.8000e-004	42.9139
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.5500e-003**	**0.0414**	**0.0348**	**2.5000e-004**		**3.1500e-003**	**3.1500e-003**		**3.1500e-003**	**3.1500e-003**	**0.0000**	**45.0334**	**45.0334**	**8.7000e-004**	**8.2000e-004**	**45.3010**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	11988	0.7736	1.6000e-004	3.0000e-005	0.7872
Health Club	244188	15.7570	3.2100e-003	6.6000e-004	16.0353
Parking Lot	31640	2.0417	4.2000e-004	9.0000e-005	2.0777
Total		**18.5722**	**3.7900e-003**	**7.8000e-004**	**18.9003**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	11988	0.7736	1.6000e-004	3.0000e-005	0.7872
Health Club	244188	15.7570	3.2100e-003	6.6000e-004	16.0353
Parking Lot	31640	2.0417	4.2000e-004	9.0000e-005	2.0777
Total		**18.5722**	**3.7900e-003**	**7.8000e-004**	**18.9003**

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	0.1630	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-003
Unmitigated	0.1630	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-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	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-003
Total	**0.1630**	**3.0000e-005**	**3.0300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.9000e-003**	**5.9000e-003**	**2.0000e-005**	**0.0000**	**6.2900e-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	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2900e-003
Total	**0.1630**	**3.0000e-005**	**3.0300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.9000e-003**	**5.9000e-003**	**2.0000e-005**	**0.0000**	**6.2900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e

Category	MT/yr			
Mitigated	1.8314	2.7600e-003	1.6500e-003	2.3922
Unmitigated	1.8314	2.7600e-003	1.6500e-003	2.3922

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.174545 / 0.448831	0.2241	2.5000e-004	1.4000e-004	0.2723
Health Club	1.91032 / 1.17084	1.6073	2.5200e-003	1.5100e-003	2.1199
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8314**	**2.7700e-003**	**1.6500e-003**	**2.3922**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.174545 / 0.448831	0.2241	2.5000e-004	1.4000e-004	0.2723
Health Club	1.91032 / 1.17084	1.6073	2.5200e-003	1.5100e-003	2.1199
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000

Total		**1.8314**	**2.7700e-003**	**1.6500e-003**	**2.3922**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	40.0400	2.3663	0.0000	99.1973
Unmitigated	40.0400	2.3663	0.0000	99.1973

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	13.14	2.6673	0.1576	0.0000	6.6081
Health Club	184.11	37.3727	2.2087	0.0000	92.5892
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**40.0400**	**2.3663**	**0.0000**	**99.1973**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	13.14	2.6673	0.1576	0.0000	6.6081
Health Club	184.11	37.3727	2.2087	0.0000	92.5892
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**40.0400**	**2.3663**	**0.0000**	**99.1973**

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

Veterans Memorial - Senior Center Phase 1 - San Mateo County, Annual

Veterans Memorial - Senior Center Phase 1 - 2030

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	57.00	Space	0.51	22,800.00	0
Health Club	45.00	1000sqft	1.03	45,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2030
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	142.26	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy 2017 CO2 Rate = 142.26

Land Use - Applicant provided land uses, default acreage

Construction Phase - Default construction schedule

Off-road Equipment - Default constructoin equipment

Demolition - Existing building 55,235sf / 2 = 27,617.5sf building demo

Vehicle Trips - health club = 28.82, 18.27, 23.39

Energy Use -

Water And Wastewater - WTP Treatment, 100% aerobic

Mobile Land Use Mitigation -

Energy Mitigation - effecient LED lighting

Water Mitigation - Water conservation measures, on-site storage and low flow

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	142.26
tblProjectCharacteristics	N2OIntensityFactor	0	0.006
tblVehicleTrips	ST_TR	20.87	18.27
tblVehicleTrips	SU_TR	26.73	23.39
tblVehicleTrips	WD_TR	32.93	28.82
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

2.2 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	0.2013	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-003
Energy	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	81.9013	81.9013	5.7200e-003	2.0400e-003	82.6514

Mobile	0.1860	0.5050	1.8378	6.7900e-003	0.7652	4.5700e-003	0.7698	0.2057	4.2500e-003	0.2099	0.0000	624.8820	624.8820	0.0228	0.0000	625.4526
Waste						0.0000	0.0000		0.0000	0.0000	52.0672	0.0000	52.0672	3.0771	0.0000	128.9942
Water						0.0000	0.0000		0.0000	0.0000	0.9416	1.2977	2.2393	3.5100e-003	2.1000e-003	2.9535
Total	**0.3933**	**0.5596**	**1.8846**	**7.1200e-003**	**0.7652**	**8.7200e-003**	**0.7740**	**0.2057**	**8.4000e-003**	**0.2141**	**53.0088**	**708.0829**	**761.0917**	**3.1091**	**4.1400e-003**	**840.0536**

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	0.2013	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-003
Energy	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	77.3027	77.3027	4.7800e-003	1.8400e-003	77.9716
Mobile	0.1860	0.5050	1.8378	6.7900e-003	0.7652	4.5700e-003	0.7698	0.2057	4.2500e-003	0.2099	0.0000	624.8820	624.8820	0.0228	0.0000	625.4526
Waste						0.0000	0.0000		0.0000	0.0000	52.0672	0.0000	52.0672	3.0771	0.0000	128.9942
Water						0.0000	0.0000		0.0000	0.0000	0.9416	1.1135	2.0551	3.4700e-003	2.0900e-003	2.7660
Total	**0.3933**	**0.5596**	**1.8846**	**7.1200e-003**	**0.7652**	**8.7200e-003**	**0.7740**	**0.2057**	**8.4000e-003**	**0.2141**	**53.0088**	**703.3001**	**756.3089**	**3.1082**	**3.9300e-003**	**835.1863**

	ROG	NOx	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**	**0.68**	**0.63**	**0.03**	**5.07**	**0.58**

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	0.1860	0.5050	1.8378	6.7900e-003	0.7652	4.5700e-003	0.7698	0.2057	4.2500e-003	0.2099	0.0000	624.8820	624.8820	0.0228	0.0000	625.4526
Unmitigated	0.1860	0.5050	1.8378	6.7900e-003	0.7652	4.5700e-003	0.7698	0.2057	4.2500e-003	0.2099	0.0000	624.8820	624.8820	0.0228	0.0000	625.4526

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	1,296.90	822.15	1052.55	2,063,130	2,063,130
Parking Lot	0.00	0.00	0.00		
Total	1,296.90	822.15	1,052.55	2,063,130	2,063,130

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
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Health Club	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Parking Lot	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	17.8688	17.8688	3.6400e-003	7.5000e-004	18.1844
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22.4674	22.4674	4.5800e-003	9.5000e-004	22.8643
NaturalGas Mitigated	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	59.4339	59.4339	1.1400e-003	1.0900e-003	59.7871
NaturalGas Unmitigated	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	59.4339	59.4339	1.1400e-003	1.0900e-003	59.7871

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					
Health Club	1.11375e+006	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	59.4339	59.4339	1.1400e-003	1.0900e-003	59.7871
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.0100e-003**	**0.0546**	**0.0459**	**3.3000e-004**		**4.1500e-003**	**4.1500e-003**		**4.1500e-003**	**4.1500e-003**	**0.0000**	**59.4339**	**59.4339**	**1.1400e-003**	**1.0900e-003**	**59.7871**

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					
Health Club	1.11375e+006	6.0100e-003	0.0546	0.0459	3.3000e-004		4.1500e-003	4.1500e-003		4.1500e-003	4.1500e-003	0.0000	59.4339	59.4339	1.1400e-003	1.0900e-003	59.7871
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.0100e-003**	**0.0546**	**0.0459**	**3.3000e-004**		**4.1500e-003**	**4.1500e-003**		**4.1500e-003**	**4.1500e-003**	**0.0000**	**59.4339**	**59.4339**	**1.1400e-003**	**1.0900e-003**	**59.7871**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	340200	21.9524	4.4800e-003	9.3000e-004	22.3402
Parking Lot	7980	0.5149	1.0000e-004	2.0000e-005	0.5240
Total		**22.4674**	**4.5800e-003**	**9.5000e-004**	**22.8643**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	272925	17.6113	3.5900e-003	7.4000e-004	17.9224

Parking Lot	3990	0.2575	5.0000e-005	1.0000e-005	0.2620
Total		**17.8688**	**3.6400e-003**	**7.5000e-004**	**18.1844**

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	0.2013	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-003
Unmitigated	0.2013	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-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	0.0239					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1772					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-003

Total	**0.2013**	**1.0000e-005**	**9.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8200e-003**	**1.8200e-003**	**0.0000**	**0.0000**	**1.9400e-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	0.0239					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1772					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8200e-003	1.8200e-003	0.0000	0.0000	1.9400e-003
Total	**0.2013**	**1.0000e-005**	**9.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8200e-003**	**1.8200e-003**	**0.0000**	**0.0000**	**1.9400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

Mitigated	2.0551	3.4700e-003	2.0900e-003	2.7660
Unmitigated	2.2393	3.5100e-003	2.1000e-003	2.9535

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	2.66144 / 1.63121	2.2393	3.5100e-003	2.1000e-003	2.9535
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.2393**	**3.5100e-003**	**2.1000e-003**	**2.9535**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	2.66144 / 0.815603	2.0551	3.4700e-003	2.0900e-003	2.7660
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.0551**	**3.4700e-003**	**2.0900e-003**	**2.7660**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	52.0672	3.0771	0.0000	128.9942
Unmitigated	52.0672	3.0771	0.0000	128.9942

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	256.5	52.0672	3.0771	0.0000	128.9942
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**52.0672**	**3.0771**	**0.0000**	**128.9942**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	256.5	52.0672	3.0771	0.0000	128.9942
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**52.0672**	**3.0771**	**0.0000**	**128.9942**

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

Veterans Memorial - YMCA Phase 2 - San Mateo County, Annual

Veterans Memorial - YMCA Phase 2 - 2030

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Day-Care Center	72.00	Student	0.09	2,700.00	0
Parking Lot	226.00	Space	2.03	90,400.00	0
Health Club	32.30	1000sqft	0.74	32,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2030
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	142.26	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy 2017 CO2 Rate = 142.26

Land Use - Applicant provided land uses, default acreage

Construction Phase - Default construction schedule

Off-road Equipment - Default constructoin equipment

Demolition - Existing building 55,235sf / 2 = 27,617.5sf building demo

Vehicle Trips - health club = 28.82, 18.27, 23.39, daycare = 4.09, 0.36, 0.35

Energy Use -

Water And Wastewater - WTP Treatment, 100% aerobic

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Grading - 1,365cy export

Trips and VMT -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	1,365.00
tblLandUse	LandUseSquareFeet	4,069.64	2,700.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	142.26
tblProjectCharacteristics	N2OIntensityFactor	0	0.006
tblVehicleTrips	ST_TR	0.39	0.36
tblVehicleTrips	ST_TR	20.87	18.27
tblVehicleTrips	SU_TR	0.37	0.35
tblVehicleTrips	SU_TR	26.73	23.39
tblVehicleTrips	WD_TR	4.38	4.09
tblVehicleTrips	WD_TR	32.93	28.82
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1630	3.0000e-005	3.0200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2800e-003
Energy	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	63.6056	63.6056	4.6500e-003	1.6100e-003	64.2013
Mobile	0.1634	0.4411	1.5789	5.7400e-003	0.6443	3.9000e-003	0.6482	0.1732	3.6300e-003	0.1768	0.0000	528.0610	528.0610	0.0194	0.0000	528.5462
Waste						0.0000	0.0000		0.0000	0.0000	40.0400	0.0000	40.0400	2.3663	0.0000	99.1973
Water						0.0000	0.0000		0.0000	0.0000	0.7376	1.0938	1.8314	2.7600e-003	1.6500e-003	2.3922
Total	**0.3309**	**0.4825**	**1.6166**	**5.9900e-003**	**0.6443**	**7.0500e-003**	**0.6514**	**0.1732**	**6.7800e-003**	**0.1800**	**40.7776**	**592.7663**	**633.5439**	**2.3931**	**3.2600e-003**	**694.3433**

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	0.1630	3.0000e-005	3.0200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2800e-003
Energy	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	63.6056	63.6056	4.6500e-003	1.6100e-003	64.2013
Mobile	0.1634	0.4411	1.5789	5.7400e-003	0.6443	3.9000e-003	0.6482	0.1732	3.6300e-003	0.1768	0.0000	528.0610	528.0610	0.0194	0.0000	528.5462
Waste						0.0000	0.0000		0.0000	0.0000	40.0400	0.0000	40.0400	2.3663	0.0000	99.1973
Water						0.0000	0.0000		0.0000	0.0000	0.7376	1.0938	1.8314	2.7600e-003	1.6500e-003	2.3922

Total	**0.3309**	**0.4825**	**1.6166**	**5.9900e-003**	**0.6443**	**7.0500e-003**	**0.6514**	**0.1732**	**6.7800e-003**	**0.1800**	**40.7776**	**592.7663**	**633.5439**	**2.3931**	**3.2600e-003**	**694.3433**

	ROG	NOx	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**

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	0.1634	0.4411	1.5789	5.7400e-003	0.6443	3.9000e-003	0.6482	0.1732	3.6300e-003	0.1768	0.0000	528.0610	528.0610	0.0194	0.0000	528.5462
Unmitigated	0.1634	0.4411	1.5789	5.7400e-003	0.6443	3.9000e-003	0.6482	0.1732	3.6300e-003	0.1768	0.0000	528.0610	528.0610	0.0194	0.0000	528.5462

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Day-Care Center	294.48	25.92	25.20	256,306	256,306
Health Club	930.89	590.12	755.50	1,480,869	1,480,869
Parking Lot	0.00	0.00	0.00		
Total	1,225.37	616.04	780.70	1,737,175	1,737,175

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
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Day-Care Center	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Health Club	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Parking Lot	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896

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	18.5722	18.5722	3.7900e-003	7.8000e-004	18.9003
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	18.5722	18.5722	3.7900e-003	7.8000e-004	18.9003
NaturalGas Mitigated	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	45.0334	45.0334	8.6000e-004	8.3000e-004	45.3010
NaturalGas Unmitigated	4.5500e-003	0.0414	0.0348	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	45.0334	45.0334	8.6000e-004	8.3000e-004	45.3010

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					
Day-Care Center	44469	2.4000e-004	2.1800e-003	1.8300e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.3730	2.3730	5.0000e-005	4.0000e-005	2.3871
Health Club	799425	4.3100e-003	0.0392	0.0329	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.6604	42.6604	8.2000e-004	7.8000e-004	42.9139
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.5500e-003**	**0.0414**	**0.0348**	**2.5000e-004**		**3.1500e-003**	**3.1500e-003**		**3.1500e-003**	**3.1500e-003**	**0.0000**	**45.0334**	**45.0334**	**8.7000e-004**	**8.2000e-004**	**45.3010**

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					
Day-Care Center	44469	2.4000e-004	2.1800e-003	1.8300e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.3730	2.3730	5.0000e-005	4.0000e-005	2.3871
Health Club	799425	4.3100e-003	0.0392	0.0329	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.6604	42.6604	8.2000e-004	7.8000e-004	42.9139
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.5500e-003**	**0.0414**	**0.0348**	**2.5000e-004**		**3.1500e-003**	**3.1500e-003**		**3.1500e-003**	**3.1500e-003**	**0.0000**	**45.0334**	**45.0334**	**8.7000e-004**	**8.2000e-004**	**45.3010**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Day-Care Center	11988	0.7736	1.6000e-004	3.0000e-005	0.7872
Health Club	244188	15.7570	3.2100e-003	6.6000e-004	16.0353
Parking Lot	31640	2.0417	4.2000e-004	9.0000e-005	2.0777
Total		**18.5722**	**3.7900e-003**	**7.8000e-004**	**18.9003**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	11988	0.7736	1.6000e-004	3.0000e-005	0.7872
Health Club	244188	15.7570	3.2100e-003	6.6000e-004	16.0353
Parking Lot	31640	2.0417	4.2000e-004	9.0000e-005	2.0777
Total		**18.5722**	**3.7900e-003**	**7.8000e-004**	**18.9003**

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	0.1630	3.0000e-005	3.0200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2800e-003
Unmitigated	0.1630	3.0000e-005	3.0200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2800e-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	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2800e-003
Total	**0.1630**	**3.0000e-005**	**3.0200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.9000e-003**	**5.9000e-003**	**2.0000e-005**	**0.0000**	**6.2800e-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	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.9000e-003	5.9000e-003	2.0000e-005	0.0000	6.2800e-003

Total	**0.1630**	**3.0000e-005**	**3.0200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.9000e-003**	**5.9000e-003**	**2.0000e-005**	**0.0000**	**6.2800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.8314	2.7600e-003	1.6500e-003	2.3922
Unmitigated	1.8314	2.7600e-003	1.6500e-003	2.3922

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.174545 / 0.448831	0.2241	2.5000e-004	1.4000e-004	0.2723
Health Club	1.91032 / 1.17084	1.6073	2.5200e-003	1.5100e-003	2.1199
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8314**	**2.7700e-003**	**1.6500e-003**	**2.3922**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.174545 / 0.448831	0.2241	2.5000e-004	1.4000e-004	0.2723
Health Club	1.91032 / 1.17084	1.6073	2.5200e-003	1.5100e-003	2.1199
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8314**	**2.7700e-003**	**1.6500e-003**	**2.3922**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	40.0400	2.3663	0.0000	99.1973
Unmitigated	40.0400	2.3663	0.0000	99.1973

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	13.14	2.6673	0.1576	0.0000	6.6081
Health Club	184.11	37.3727	2.2087	0.0000	92.5892
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**40.0400**	**2.3663**	**0.0000**	**99.1973**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	13.14	2.6673	0.1576	0.0000	6.6081
Health Club	184.11	37.3727	2.2087	0.0000	92.5892
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**40.0400**	**2.3663**	**0.0000**	**99.1973**

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

From: Kristy Weis <kweis@davidjpowers.com> **Sent:** Friday, February 22, 2019 12:38 PM
To: Michael S. Thill <mthill@illingworthrodkin.com>; James Reyff <jreyff@illingworthrodkin.com>; Casey Divine CDivine@illingworthrodkin.com **Cc:** Desiree Dei Rossi <DDeiRossi@davidjpowers.com>; Caroline Weston CWeston@davidjpowers.com **Subject:** FW: Veteran's - Trip Gen and Volumes

Hi! Traffic info attached. Trip gen below.
Thanks#Kristy

From: Trisha Dudala <tdudala@hextrans.com> **Sent:** Friday, February 22, 2019 11:55 AM
To: Kristy Weis <kweis@davidjpowers.com> **Cc:** Gary Black <gblack@hextrans.com>; Michael Lisenbee <mlisenbee@davidjpowers.com>; Caroline Weston <CWeston@davidjpowers.com>; Desiree Dei Rossi <DDeiRossi@davidjpowers.com> **Subject:** Veteran's - Trip Gen and Volumes

Hi Kristy,

Provided below is the trip generation information. Volumes for all 14 study intersections, 6 scenarios and 4 times periods are included in the attached tables and graphics. Please let me know if you need anything else.

Joint VMSC & YMCA - Weekday Trip Generation

Land Use	Size	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Total Trips	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Total Trips
Proposed Expansion							
YMCA [1]	32,300 s.f.	107	82	189	87	79	166
Day Care [2]	72 Students	30	26	56	27	30	57
Net New Trips at Project Site		**137**	**108**	**245**	**114**	**109**	**223**

Notes:

1. Based on existting counts conducted at the Sequoia YMCA.
2. Trip generation for day care center was estimated based on average trip rates (per student) presented in the *ITE Trip Generation Manual, 10 Edition* for Day Care Center (Land Use 565).

Joint VMSC & YMCA - Weekend Trip Generation

Land Use	Size	Saturday Peak Hour Trips In	Saturday Peak Hour Trips Out	Saturday Peak Hour Total Trips	Sunday Peak Hour Trips In	Sunday Peak Hour Trips Out	Sunday Peak Hour Total Trips
Proposed Expansion							
YMCA [1]	32,300 s.f.	35	67	102	37	41	78

Notes:

1. Based on existting counts conducted at the Sequoia YMCA.

Trisha

Attachment 3: Construction Health Risk Calculations

VMSC & YMCA, Redwood City, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2020	Construction	0.0868	DPM	173.5	0.05282	6.66E-03	9,681	**6.88E-07**
2021	Construction	0.0096	DPM	19.3	0.00587	7.40E-04	9,681	**7.64E-08**
2022	Construction	0.0914	DPM	182.8	0.05565	7.01E-03	15,474	**4.53E-07**
2023	Construction	0.0003	DPM	0.6	0.00019	2.45E-05	15,474	**1.59E-09**
Total		***0.1881***		***376.2***	***0.1145***	***0.0144***		

Operation Hours

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

VMSC & YMCA, Redwood City, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2020	Construction	FUG	0.0099	19.8	0.00603	7.59E-04	9,681	**7.85E-08**
2021	Construction	FUG	0.0011	2.2	0.00067	8.44E-05	9,681	**8.72E-09**
2022	Construction	FUG	0.0143	28.6	0.00871	1.10E-03	15,474	**7.09E-08**
2023	Construction	FUG	0.0000	0.0	0.00001	7.67E-07	15,474	**4.96E-11**
Total			***0.0253***	***50.6***	***0.0154***	***0.0019***		

Operation Hours

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

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2020	Construction	0.0114	DPM	22.9	0.00696	8.77E-04	9,681	**9.06E-08**
2021	Construction	0.0013	DPM	2.5	0.00077	9.74E-05	9,681	**1.01E-08**
2022	Construction	0.0155	DPM	31.0	0.00944	1.19E-03	15,474	**7.68E-08**
2023	Construction	0.0001	DPM	0.1	0.00004	4.60E-06	15,474	**2.97E-10**
Total		***0.0283***		***56.5***	***0.0172***	***0.0022***		

Operation Hours

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

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

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2020	Construction	FUG	0.0029	5.7	0.00174	2.20E-04	9,681	**2.27E-08**
2021	Construction	FUG	0.0003	0.6	0.00019	2.44E-05	9,681	**2.52E-09**
2022	Construction	FUG	0.0046	9.3	0.00282	3.55E-04	15,474	**2.30E-08**
2023	Construction	FUG	0.0000	0.0	0.00001	7.67E-07	15,474	**4.96E-11**
Total			***0.0078***	***15.6***	***0.0048***	***0.0006***		

Operation Hours

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

VMSC & YMCA, Redwood City, CA
Construction Health Impacts Summary

Maximum Impacts at Construction MEI Location

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk* (per million): Child	Cancer Risk* (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2020	0.0745	0.0120	-	-	0.015	0.09
2021	0.0083	0.0013	-	-	0.002	0.01
2022	0.1149	0.0237	20.4	0.33	0.023	0.14
2023	0.0004	0.0000	0.1	0.00	0.000	0.00
Maximum	0.1149	0.0237	-	-	**0.023**	**0.14**
Total	-	-	**20.5**	**0.3**	-	-

* Maximum cancer risks occur with 3rd trimester/infant exposure begining in 2022 (Phase 2)

Maximum Impacts at Construction MEI Location - Mitigated*

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2020	0.0098	0.0035	-	-	0.002	0.01
2021	0.0011	0.0004	-	-	0.000	0.00
2022	0.0195	0.0077	3.5	0.06	0.004	0.03
2023	0.0001	0.0000	0.0	0.00	0.000	0.00
Maximum	0.0195	0.0077	-	-	**0.004**	**0.03**
Total	-	-	**3.5**	**0.1**	-	-

* Mitigation = use of Tier 3 equipment with CARB Level 3 DPFs

Maximum Impacts at John Gill Elementary School

Construction Year	Unmitigated Emissions: Maximum Concentrations: Exhaust PM2.5/DPM ($\mu g/m^3$)	Unmitigated Emissions: Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2019	0.0255	0.0032	1.0	0.01	0.03
2019	0.0028	0.0004	0.1	0.00	0.00
2019	0.0121	0.0024	0.5	0.00	0.01
2019	0.0000	0.0000	0.0	0.00	0.00
Maximum	0.0255	0.0032	-	**0.005**	**0.03**
Total	-	-	**1.6**	-	-

VMSC & YMCA, Redwood City, CA
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated
Impacts at Off-Site Receptors-1.5 meter

Cancer Risk Calculation Method

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

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

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

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

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult	Maximum	
	Exposure				Age	Cancer	Modeled		Age	Cancer		
Exposure	Duration		DPM Conc (ug/m3)		Sensitivity	Risk	DPM Conc (ug/m3)		Sensitivity	Risk	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
0	0	-	2020**	0.0745	-	-	2020**	0.0745	1	-	0.012	0.0865
0	0	-	2021**	0.0083	-	-	2021**	0.0083	1	-	0.00133	0.0096
1	0.25	-0.25 - 0*	2022	0.1149	10	1.56	2022	0.1149	1	-	0.02372	0.1386
1	1	0 - 1	2022	0.1149	10	18.88	2022	0.1149	1	0.33	0.02372	0.1386
2	1	1 - 2	2023	0.0004	10	0.07	2023	0.0004	1	0.00	0.00002	0.0004
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						**20.5**				**0.3**		

* Third trimester of pregnancy

** Maximum cancer risks occur with 3rd trimester/infant exposure begining in 2022 (Phase 2)

VMSC & YMCA, Redwood City, CA
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated
Impacts at Off-Site Receptors-4.5 meter

Cancer Risk Calculation Method

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

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

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

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

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult	Maximum	
	Exposure				Age	Cancer	Modeled		Age	Cancer		
Exposure	Duration		DPM Conc (ug/m3)		Sensitivity	Risk	DPM Conc (ug/m3)		Sensitivity	Risk	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
0	0	-	2020**	0.0689	-	-	2020**	0.0689	1	-	0.01044	0.0794
0	0	-	2021**	0.0077	-	-	2021**	0.0077	1	-	0.00116	0.0088
1	0.25	-0.25 - 0*	2022	0.1131	10	1.54	2022	0.1131	1	-	0.02336	0.1364
1	1	0 - 1	2022	0.1131	10	18.57	2022	0.1131	1	0.32	0.02336	0.1364
2	1	1 - 2	2023	0.0004	10	0.07	2023	0.0004	1	0.00	0.00002	0.0004
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						**20.2**				**0.3**		

* Third trimester of pregnancy

** Maximum cancer risks occur with 3rd trimester/infant exposure begining in 2022 (Phase 2)

VMSC & YMCA, Redwood City, CA
Maximum DPM Cancer Risk Calculations From Construction - Mitigated
Impacts at Off-Site Receptors-1.5 meter

Cancer Risk Calculation Method

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

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

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

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

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

		Infant/Child - Exposure Information				Infant/Child	Adult - Exposure Information			Adult	Maximum	
	Exposure		DPM Conc (ug/m3)		Age	Cancer	Modeled DPM Conc (ug/m3)		Age	Cancer		
Exposure Year	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	-	2020**	0.0098	-	-	2020**	0.0098	1	-	0.00347	0.0133
0	0	-	2021**	0.0011	-	-	2021**	0.0011	1	-	0.00039	0.0015
1	0.25	-0.25 - 0*	2022	0.0195	10	0.26	2022	0.0195	1	-	0.00769	0.0272
1	1	0 - 1	2022	0.0195	10	3.20	2022	0.0195	1	0.06	0.00769	0.0272
2	1	1 - 2	2023	0.0001	10	0.01	2023	0.0001	1	0.00	0.00002	0.0001
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						**3.5**				**0.1**		

* Third trimester of pregnancy

** Maximum cancer risks occur with 3rd trimester/infant exposure begining in 2022 (Phase 2)

John Gill Elementary School, Redwood City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction
School - 1.0 meters - Child Exposure

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

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

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

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

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	861	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

		Child - Exposure Information			Child	Maximum	
Exposure Year	Exposure Duration (years)	DPM Conc (ug/m3) Year	Annual	Age* Sensitivity Factor	Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
1	1	2020	0.0255	3	0.99	0.0032	0.029
2	1	2021	0.0028	3	0.11	0.0004	0.003
3	1	2022	0.0121	3	0.47	0.0024	0.014
4	1	2023	0.0000	3	0.00	0.0000	0.000
5	1		0.0000	3	0.00		
6	1		0.0000	3	0.00		
7	1		0.0000	3	0.00		
8	1		0.0000	3	0.00		
9	1		0.0000	3	0.00		
10	1		0.0000	3	0.00		
11	1		0.0000	3	0.00		
12	1		0.0000	3	0.00		
13	1		0.0000	3	0.00		
14	1		0.0000	3	0.00		
15	1		0.0000	1	0.00		
16	1		0.0000	1	0.00		
17	1		0.0000	1	0.00		
18	1		0.0000	1	0.00		
19	1		0.0000	1	0.00		
20	1		0.0000	1	0.00		
21	1		0.0000	1	0.00		
22	1		0.0000	1	0.00		
23	1		0.0000	1	0.00		
24	1		0.0000	1	0.00		
25	1		0.0000	1	0.00		
26	1		0.0000	1	0.00		
27	1		0.0000	1	0.00		
28	1		0.0000	1	0.00		
29	1		0.0000	1	0.00		
30	1		0.0000	1	0.00		
					1.6		

* Students assumed to be from 2 to 9 years of age

Attachment 4: Screening Community Risk Calculations

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

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

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo
Roadway Direction	East-West
Side of the Roadway	South
Distance from Roadway	380 feet
	Const Res MEI
Annual Average Daily Traffic (ADT)	23,950

Results

San Mateo County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

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

Cancer Risk

2.74 (per million)

Jefferson Ave

Cumulative plus project volumes from traffic report

Data for San Mateo County based on meteorological data collected from San Mateo Sewage Treatment Plant in

Adjusted for 2015 OEHHA and EMFAC2014 for 2018

1.88

(per million)

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

Notes and References:

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

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Risk & Hazard Stationary Source Inquiry Form

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

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

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

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

Table A: Requester Contact Information

Date of Request	**2/28/2019**
Contact Name	Casey Divine
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	cdivine@illingworthrodkin.com
Project Name	Redwood City Veterans Memorial Senior Center and YMCA Joint Project
Address	1455 Madison Avenue
City	Redwood City
County	San Mateo
Type (residential, commercial, mixed use, industrial, etc.)	Recreational
Project Size (# of units or building square feet)	45,000sf Veterans center, 35,000sf YMCA
Comments:	

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

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

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

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

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

5. List the stationary source information in blue section only.

6. Note that a small percentage of the stati Table B s have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by a xt to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and can ed further.

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

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

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

Table B: Google Earth data

Distance from Receptor (feet) or MEI[1]	Facility Name	Address	Plant No.	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments
1000	City of Redwood City #9914/Red Morton Community Cn	1120 Roosevelt Avenue	17467	4.995	0.008	0.006	S1	Generator		Use Diesel ICE multiplier

Construction Residential MEI

Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
0.04	0.2	0.00	0.00

Footnotes:

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

Date last updated:
03/13/2018