

APPENDIX D

Greenhouse Gas Emissions Assessment

Peninsula Heights

Greenhouse Gas Emissions Assessment

San Mateo, California

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ATTACHMENTS

Attachment A – CalEEMod Output File for Greenhouse Gas Emissions

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ABAG	Association of Bay Area Governments
BAAQMD	Bay Area Air Quality Management District
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CH ₄	methane
City	City of San Mateo
Corridor Plan	Rail Corridor Transit-Oriented Development Plan
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalents
EIR	Environmental Impact Report
EO	Executive Order
GHG	greenhouse gas
IPPC	Intergovernmental Panel on Climate Change
kW	kilowatt
N ₂ O	nitrous oxide
PRC	Public Resources Code
Project	Peninsula Heights Project
RTP	Regional Transportation Plan
SB	Senate Bill
SCS	Sustainable Communities Strategy
TDM	Transportation Demand Management
TOD	Transit-Oriented Development
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled

1.0 INTRODUCTION

This report documents the results of an assessment of greenhouse gas (GHG) emissions completed for the Peninsula Heights Project (Project). The Project is the construction of a 290-unit residential development in San Mateo, California. The development will include single-family detached homes and three-to four-story townhomes. This assessment is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for project-level review and was prepared with consideration of the emissions reduction actions proposed by the Project. GHG emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. Emissions modeling results are included in Attachment A.

1.1 Project Location

The Proposed Project site is located on approximately 15.45 acres and is currently developed with four office buildings which will be demolished prior to Project construction. The Project site is located on either side of Campus Drive, which provides access to the site. Highway 92 is located to the west of the Project side and West Hillsdale Boulevard is located to the south.

The Project site is bounded by commercial and residential developments. Nearby uses include several restaurants, a Rite Aid Pharmacy, a small grocery store, two banks, College Heights Church and Oak View Apartments to the south; low density residential uses and Peninsula Golf and Country Club to the north; and immediately surrounding the Project site are a U.S. Postal Service Information and Accounting building, GSV Labs building, Incorta office building, ENFOS office building, and several other office and corporate buildings.

1.2 Project Description

The Project includes the demolition of four office buildings, totally 224,844 total square feet, that currently exist on the Project site. Following demolition, the Project would be constructed on two parcels totaling 15.45 acres. The Project proposes of 290 residential units. On the northern parcel, the units would be composed of multiple-family dwellings with 42 2-bedroom units, 50 3-bedroom units, and 12 4-bedroom units. The northern parcel would also include 30 4-bedroom single-family detached units. On the southern parcel, the units would be composed of multiple-family dwellings with 43 2-bedroom units, 53 3-bedroom units, and 16 4-bedroom units. The southern parcel would also include 44 4-bedroom single-family dwellings. The Project is anticipated to result in 268 net daily new trips over that currently generated on the site by the existing office buildings (Kittelson & Associates 2020).

The proposed architectural style is contemporary and includes townhome, single-family detached, and stacked flats building arrangements. A total of 625 on-site parking spaces are proposed for residents, which include attached garages and approximately 37 outdoor residential guest parking spaces.

The Project would also include outdoor community spaces. These community spaces include six pocket parks, a dog park, playground, communal garden, viewpoint overlooks, picnic areas, sports and fitness areas, and flexible green spaces. Open space would comprise 282,831 square feet of the total 15.45 acres.

The Project site is designated and zoned *E1 - Executive Office*. The Project requires a Special Use Permit to allow for residential development in the *E1* zone.

2.0 GREENHOUSE GAS EMISSIONS

2.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect. Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH₄ traps over 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂ (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e), which weight each gas by its global warming potential. Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO₂ is emitted into the atmosphere than is

sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO₂ emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere (IPCC 2013).

Table 1. Greenhouse Gases	
Greenhouse Gas	Description
CO ₂	CO ₂ is a colorless, odorless gas. CO ₂ is emitted in a number of ways, both naturally and through human activities. The largest source of CO ₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO ₂ emissions. The atmospheric lifetime of CO ₂ is variable because it is so readily exchanged in the atmosphere. ¹
CH ₄	CH ₄ is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH ₄ is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH ₄ to the atmosphere. Natural sources of CH ₄ include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH ₄ is about 12 years. ²
N ₂ O	N ₂ O oxide is a clear, colorless gas with a slightly sweet odor. N ₂ O is produced by both natural and human-related sources. Primary human-related sources of N ₂ O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N ₂ O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N ₂ O is approximately 120 years. ³

Sources: ¹U.S. Environmental Protection Agency (USEPA) 2016a, ²USEPA 2016b, ³USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice it to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

2.1.1 Sources of Greenhouse Gas Emissions

In 2019, CARB released the 2019 edition of the California GHG inventory covering calendar year 2017 emissions. In 2017, California emitted 424.1 million gross metric tons of CO₂e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for approximately 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (24 percent) and the electric power sector including both in- and out-of-state sources (15 percent) (CARB 2019). Emissions of CO₂ are by-products of fossil fuel combustion. CH₄, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and

landfills. N₂O is also largely attributable to agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution

(CO₂ dissolving into the water), respectively, two of the most common processes for removing CO₂ from the atmosphere.

2.2 Regulatory Framework

2.2.1 State

Executive Order (EO) S-3-05

EO S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the State. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

While dated, this executive order remains relevant because a more recent California Appellate Court decision, *Cleveland National Forest Foundation v. San Diego Association of Governments* (November 24, 2014) 231 Cal.App.4th 1056, examined whether it should be viewed as having the equivalent force of a legislative mandate for specific emissions reductions. While the California Supreme Court ruled that the San Diego Association of Governments did not abuse its discretion by declining to adopt the 2050 goal as a measure of significance in light of the fact that the EO does not specify any plan or implementation measures to achieve its goal, the decision also recognized that the goal of a 40-percent reduction in 1990 GHG levels by 2030 is "widely acknowledged" as a "necessary interim target to ensure that California meets its longer-range goal of reducing GHGs 80 percent below 1990 levels by the year 2050."

Assembly Bill (AB) 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed AB 32 (Health and Safety Code §38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has identified a GHG reduction target of 15 percent from current levels for local governments and notes that successful implementation relies on local governments' land use planning and urban growth decisions.

Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which was re-approved by CARB on August 24, 2011, that outlines measures to meet the 2020 GHG reduction goals. To meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures for further study and possible State implementation, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO₂e (about 191 million U.S. tons) from the transportation, energy, agriculture, and forestry sectors and other sources could be achieved should the State implement all of the measures in the Scoping Plan.

The Scoping Plan is required by AB 32 to be updated at least every five years. The first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB. The 2017 Scoping Plan Update was adopted on December 14, 2017. The Scoping Plan Update addresses the 2030 target established by Senate Bill (SB) 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

EO B-30-15

On April 20, 2015 Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

SB 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

SB X1-2 of 2011, SB 350 of 2015, and SB 100 of 2018

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California.

In October 2015, SB 350 was signed by Governor Brown, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60-percent renewable procurement by 2030 and 100 percent by 2045 RPS.

2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the state on the forefront of energy efficiency, sustainability, energy independence, and climate change issues. The 2019 Energy Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Energy Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 Energy Standards are a major step toward meeting Zero Net Energy. The most significant efficiency improvement to the residential Energy Standards include the introduction of photovoltaic into the perspective package, improvements for attics, walls, water heating, and lighting. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. These new standards, applicable to the Project, require all residential development, three stories and under, to have 100-percent electricity production offset by solar.

2.2.2 Local

BAAQMD

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines include guidance on assessing GHGs and climate change impacts as required under CEQA Section 15183.5(b). The BAAQMD CEQA Guidelines establish thresholds of significance which align with the GHG reduction goals of AB 32, which as previously stated seeks to reduce statewide GHG emissions to 1990 levels by the end of the year 2020. The BAAQMD CEQA Guidelines constitute the qualified GHG reduction strategy for the San Francisco Bay Area Air Basin (SFBAAB). Therefore, a project which meets the standards established by the BAAQMD CEQA Guidelines will not have a significant environmental impact due to generation of GHG emissions.

The BAAQMD project-level operational threshold of significance for GHG emissions are as follows:

- The project generation of 1,100 metric tons of CO₂e per year during operations (bright-line numeric threshold) for 2020;
- **or** the project generation of 4.6 metric tons of CO₂e per service population (employees + patrons + residents) per year during operations (efficiency-based threshold) for 2020;
- **or** compliance with a Qualified GHG Reduction Strategy (BAAQMD 2017a).

Association of Bay Area Governments (ABAG) Final Plan Bay Area 2040

The ABAG Plan Bay Area is the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) for the San Francisco Bay Area. Plan Bay Area 2040 estimates a 14.3 percent reduction in GHG emissions per capita by 2020 and a 15.5 percent reduction by 2035 compared to 2005. The region's applicable GHG per capita emissions targets, mandated by CARB, are a 7 percent reduction for 2020, and

a 15 percent reduction for 2035, compared to 2005. Plan Bay Area 2040 establishes means of establishing GHG reduction goals through transportation improvements, including a clean vehicle feebate and targeted transportation alternatives. CARB has confirmed the San Francisco Bay Area will achieve the mandated GHG reduction targets of 7 percent and 15 percent for 2020 and 2035 respectively by implementing Plan Bay Area (CARB 2018).

BAAQMD 2017 Clean Air Plan

The 2017 Clean Air Plan (BAAQMD 2017b) provides a regional strategy with the goal of protecting public health and protecting the climate. The 2017 Clean Air Plan is consistent with the California GHG reduction goals. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a “post-carbon economy” without fossil fuel combustion, as needed to achieve ambitious greenhouse gas reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets.

The 2017 Clean Air Plan includes numerous control measures designed to reduce GHG emissions from stationary and transportation sources. The plan lays the framework for reducing Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

The City of San Mateo (City) Climate Action Plan

The City adopted an updated community-wide Climate Action Plan (CAP) in April 2020, which updates and consolidated the various City's GHG reduction efforts based on the vision of San Mateo residents, businesses, and local government. The CAP provides the framework for San Mateo to reduce its community-wide GHG emissions in a manner consistent with state reduction targets and goals for 2020, 2030, and 2050. The CAP was prepared consistent with the California Environmental Quality Act (CEQA) Guidelines for Plans for the Reduction of Greenhouse Gas Emissions (CCR 15183.5). This allows the 2020 CAP to support (and possibly streamline) environmental review of GHG emissions related to future development projects within the City. The 2020 CAP is a direct update to the 2015 CAP. The 2020 CAP analyzes San Mateo's progress to date in meeting its GHG reduction targets and contains new information to achieve more significant and longer-term GHG reductions.

A CAP is a comprehensive strategy for a community to reduce emissions of GHGs, which, according to scientific consensus, are primarily responsible for causing climate change. The CAP identifies a strategy, reduction measures, and implementation actions the City will use to achieve targets consistent with state recommendations of 15 percent below 2005 emissions levels by 2020, 4.3 metric tons of carbon dioxide equivalent (MTCO₂e) per person by 2030, and 1.2 MTCO₂e per person by 2050.

The City CAP includes five key pieces:

1. An inventory of the annual GHG emissions attributable to San Mateo based on the types of activities occurring within the community and guidance from various protocols and agencies.
2. A forecast of what GHG emissions are likely to look like in 2020, 2030, and 2050 based on expected population and economic growth as predicted in the City's General Plan; with the consideration of major CO₂e emission reduction policies.

3. A reduction target, which identifies goals for reducing GHG emissions by 2020, 2030, and 2050.
4. Reduction strategies, which describe the actions the community intends to take to achieve the reduction target. Each strategy identifies the amount of GHGs that will be reduced once the strategy is implemented. The CAP also estimates benefits of existing programs.
5. An implementation and monitoring program to track progress toward the reduction target and the status of the reduction strategies. A CAP consistency checklist for future development projects is included in the implementation program.

City CAP Consistency Checklist

As part of the CAP, the City developed a CAP consistency checklist for land use projects. The checklist is a streamlined tool that identifies the CAP's mandatory requirements and provides an opportunity for project applicants to demonstrate project consistency with GHG reduction measures and actions in the CAP. The checklist identifies a general development class and the strategies which must be implemented for the Project to be compliant with the CAP. The checklist is also an opportunity to identify additional Project characteristics that support the GHG reduction targets and programs in the CAP. If a project does not comply with the applicable mandatory GHG reduction measures, mitigation measures must be implemented to require compliance.

2.3 Greenhouse Gas Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to GHGs if it would:

- 1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and
- 2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

BAAQMD Thresholds

The assessment of GHG emissions below is based on guidance from the BAAQMD. The BAAQMD CEQA Guidelines include guidance on assessing GHGs and climate change impacts as required under CEQA Section 15183.5(b) and establish thresholds of significance for impacts related to GHG emissions. "If a project complies with a Qualified Greenhouse Gas Reduction Strategy that addresses the project it would be considered less than significant". The City has determined, in its discretion, that the guidelines are based on substantial evidence to "attribute an appropriate share of GHG reductions necessary to reach statewide reduction goals to new land use development projects in the BAAQMD's jurisdiction that are evaluated pursuant to CEQA" (BAAQMD 2017a). Therefore, the City uses the BAAQMD CEQA Guidelines to determine the level of impact from the project contributions of GHG emissions.

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions; however, the air district recommends the quantification and disclosure of construction-generated GHG emissions.

As explained above, the BAAQMD project-level operational threshold of significance for 2020 GHG emissions is:

- The project generation of 1,100 metric tons of CO₂e per year during operations (bright-line numeric threshold) for 2020;
- **or** the project generation of 4.6 metric tons of CO₂e per service population (employees + residents) per year during operations (efficiency-based threshold) for 2020;
- **or** compliance with a Qualified GHG Reduction Strategy. For the purposes of this assessment, the Project is evaluated for compliance with the City CAP, as well as the BAAQMD efficiency-based service population threshold.

Note that the bright-line threshold and service population thresholds are 2020 targets, but the Project will be constructed in the years 2021 and 2022. Although the BAAQMD does not promulgate post-2020 thresholds, the following thresholds are utilized in this analysis for post-2020 emissions:

- The project generation of 660 metric tons of CO₂e per year during operations (bright-line numeric threshold) for 2030;
- **or** the project generation of 2.6 metric tons of CO₂e per service population (employees + residents) per year during operations (efficiency-based threshold) for 2030.
- **or** compliance with a Qualified GHG Reduction Strategy. For the purposes of this assessment, the Project is evaluated for compliance with the City CAP, as well as the BAAQMD efficiency-based service population threshold.

This assessment utilizes a bright-line threshold of 660 MT CO₂e/year based on the GHG reduction goals of SB 32. The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO₂e/year threshold. In the instance that the bright-line threshold is exceeded, the Project would be compared to the service population metric of 2.6, which was calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels (AEP 2016).

As previously described, statewide goals for GHG reductions in the years beyond 2020 were codified into state law with the passage of SB 32. The California Cap-and-Trade Program is the centerpiece of the current Scoping Plan as it allows the State to put a firm limit on overall carbon emissions. Under Cap-and-Trade, an overall limit on GHG emissions from capped sectors is established and facilities subject to the cap would be able to trade permits to emit GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. The program also covers fuel suppliers (natural gas and propane fuel providers as well as transportation fuel providers). Accordingly, GHG emissions associated with the Project's electricity and natural gas usage are covered by the Cap-and-Trade Program, as are GHG emission associated with the combustion of transportation fuels in the state, whether refined in-state or imported. Therefore, while Project design can

contribute to reducing potential GHG emissions from the Proposed Project, achievement of future GHG efficiency standards is also dependent, and primarily driven, on regulatory controls applied to all sectors of the California economy. Thus, the ability of this Project—and all land use development—to achieve GHG reduction goals beyond 2020 is partially out of the control of the Project and its proponents and is being addressed by the State of California.

The 2020 City CAP is the most recent update after the 2015 CAP and is written to align with the goals of SB 32. The CAP addresses estimate emissions beyond 2020, as informed by the post-2020 GHG reduction targets of SB 32 and EO S-3-05. Specifically, the City set emission reduction goals of 15 percent below 2005 emissions levels by 2020, 4.3 metric tons of carbon dioxide equivalent (MTCO₂e) per person by 2030, and 1.2 MTCO₂e per person by 2050. Therefore, Project compliance with the CAP adequately establishes Project compliance with statewide GHG reduction goals for the year 2020 associated with AB 32, and with statewide GHG reduction goals for the years beyond 2020.

Additionally, the Project is compared to ABAG's Plan Bay Area, the RTP/SCS for the San Francisco Bay Area, which establishes an overall GHG target for the Project region consistent with the post-2020 GHG reduction goals of SB 32. The Project is also compared to the BAAQMD 2017 Clean Air Plan, which defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG emissions reduction targets.

2.3.2 Methodology

GHG-related impacts were assessed in accordance with methodologies recommended by the BAAQMD and City of San Mateo. Where GHG quantification was required, emissions were modeled using CalEEMod version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction generated GHG emissions were primarily calculated using CalEEMod model defaults. Operational GHG emissions were modeled with CalEEMod based on the Project site plans and automobile trip rates identified in the traffic study prepared by Kittelson & Associates (2020). For the purposes of this analysis, projected operational emissions associated with proposed operations are compared to the existing baseline, which includes four office buildings which total 224,844 total square feet.

2.3.3 Impact Analysis

Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

City of San Mateo Climate Action Plan

The City CAP (2020) is the most recent update to the prior 2015 City CAP. The CAP is a strategic planning document that identifies sources of GHG emissions within the city's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic programs, policies, and projects to reduce emissions from the energy, transportation, land use, water use,

and waste sectors. The CAP includes GHG reduction measures in the form of GHG reduction programs, policies, projects, and strategies. The BAAQMD Qualified Greenhouse Gas Emissions Reduction Program criteria, in conjunction with the BAAQMD's CEQA Guidelines (2017a), guided the development of the emissions reduction program developed by the City. All three guidelines comply with the requirements of statewide GHG-reduction targets and achieve the goals of the Scoping Plan.

A Qualified Greenhouse Gas Emissions Reduction Program adopted by a local jurisdiction should include the elements below, as described in CEQA Guidelines Section 15183.5. The BAAQMD's CEQA Guidelines outline the methodology to determine whether a GHG reduction program meets these requirements.

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards, which substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels.
- Be adopted in a public process following environmental review.

The City CAP meets BAAQMD guidelines as follows:

- The CAP quantifies citywide GHG emissions, both existing and projected over the specified time period. The CAP projects emissions for the years 2020, 2030, and 2050 based on growth assumptions from the California Department of Finance and ABAG and were approved by City staff. Relative to 2017 emissions, San Mateo's GHG emissions are expected to rise by more than 23 percent by 2050 if no action is taken.
- The CAP establishes a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable.
- The CAP policy provisions reduce emissions to 15 percent below 2005 emissions levels by 2020.
- The CAP policy provisions reduce emissions to 4.3 MTCO₂e per person by 2030.
- The CAP policy provisions reduce emissions to 1.2 MTCO₂e per person by 2050.
- The CAP identifies and analyzes the emissions resulting from specific actions or categories of actions anticipated within the City.
- The CAP specifies measures or a group of measures, including performance standards.

- The CAP establishes a mechanism to monitor its progress toward achieving the level and to require amendment if the plan is not achieving specific levels.

The reduction measures proposed in the CAP build on inventory results and key opportunities prioritized by City staff, members of the San Mateo Sustainability Commission, and members of the public. The CAP strategies consist of measures and actions that identify the steps the City will take to support reductions in GHG emissions. The City will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. All standards presented in the CAP respond to the needs of development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources.

The CAP specifically states, "A project-specific environmental document that relies on this CAP for its cumulative impacts analysis must identify specific GHG reduction measures applicable to the project and demonstrate the project's incorporation of the measures. Project applicants and City staff will identify specific measures applicable to each project during project review. If applicable measures are not otherwise binding and enforceable, they must be incorporated as mitigation measures for the project."

A specific project proposal is considered consistent with the City CAP if it complies with the "required" GHG reduction measures in the adopted CAP. The required GHG reduction measures applicable to the proposed Project, which the Project would comply with, include the following:

- **Reduction Measure RE 2: All new developments with residential units: The project includes an on-site renewable energy system that meets or exceeds the minimum requirements of the California State Building Code:** The Project is required, per California state law, to meet the minimum requirements of the 2019 California State Building Code for Project approval. In addition, Section 23.24.030 of the City Municipal Code states "New residential buildings four stories or more shall provide a minimum of a 3-kilowatt photovoltaic system". Those buildings included in the Project which include a fourth level rooftop would be required to comply with this provision of the Municipal Code, if the City deems a rooftop level a "story".
- **Reduction Measure EE 3: All new developments with residential units: The project includes trees that provide shade to residences:** As required by the Municipal Code landscaping requirements (Section 27.62.100), the Project site plan includes trees in its landscape design, which will provide shade upon maturity.
- **Reduction Measure CF 1: All new development with dedicated offstreet parking: The project includes parking spaces with installed EV chargers or are pre-wired for EV chargers, consistent with state and any local regulations:** The Project is required, per Section 23.70.040 of the Municipal Code and Green Building Code Section 4.106.4.2, to comply with the requirement that 15 percent of the total number of parking spaces on a building site shall be electric vehicle charging spaces (EV spaces) capable of supporting future electric vehicle supply equipment (EVSE).
- **Reduction Measure CF 1: All new development with dedicated offstreet parking: The project includes parking spaces with installed EV chargers that are accessible by members of the public beyond those who live and/or work at the project:** As stated for reduction measure CF 1 above, 15

percent of the parking spaces are required to be electric vehicle charging spaces (EV spaces) capable of supporting future electric vehicle supply equipment (EVSE).

- **Reduction Measure ST 6:** *New developments of at least six multifamily units and/or 10,000 square feet of nonresidential space- Implement TDM strategies to comply with the appropriate trip reduction target identified in applicable area plans and San Mateo Citywide TDM Plan:* Transportation Demand Management (TDM) is a combination of services, incentives, facilities, and actions that reduce single-occupant vehicle trips to help relieve traffic congestion, parking demand, and air pollutants, including GHG emissions. The purpose of TDM is to promote more efficient utilization of existing transportation facilities, and to ensure that new developments are designed to maximize the potential for sustainable transportation usage. A TDM Plan has been prepared for the Proposed Project. The Project TDM Plan includes trip-reduction strategies with the goal of reducing overall vehicular trip-making activity in the Project area.

The Project is also located near Laurelwood Shopping Center, and thus within easy access to restaurants, a pharmacy, banks, a grocery store, and other services in the vicinity of the Project site. These services are conveniently located for future residents of the Proposed Project, which will further reduce the number of vehicle trips. Additionally, the Project site would be located within an area surrounded by other offsite office and residential uses. The Project also includes plentiful bike storage, which would encourage residents to bike rather than drive, when feasible. Finally, the Project would help increase ridership for the existing dedicated Caltrain shuttle route that is currently at risk of ceasing due to lack of use. This dedicated Caltrain shuttle would serve employees and residents. A Caltrain stop is located along Campus drive, on either side of the proposed residences (Peninsula Office Park).

- **Reduction Measure ST 7:** *All new development: Be located along El Camino Real, within one-half mile of any Caltrain station, or in the Rail Corridor Transit Oriented Development or Hillsdale Station Area Plan areas:* The Project site would be located less than 0.25 mile from the nearest Caltrain stops, located at both ends of Peninsula Office Park. Specifically, the nearest proposed residences would be as close as a one-minute walk away. Although the Project is not within one-half mile of a Caltrain station or within either plan areas, the Peninsula Heights Planning Application states that the Project would help increase ridership for the existing dedicated Caltrain shuttle route that is currently at risk due to lack of use.

The Project would not meet the following applicable reduction measure requirements prior to implementation of mitigation:

- **Reduction Measure BE 1:** *All new development: The project does not have natural gas connections, and does not have any natural gas appliances or other equipment installed.*
- **Reduction Measure RE 2:** *All new developments with residential units: The project includes an on-site energy storage system, such as a battery.*
- **Reduction Measure SW 1:** *All developments with multifamily units or nonresidential space: Provide an area of sufficient space to store and allow access to a compost bin.*
- **Reduction Measure WW 3:** *All new development: Include a greywater system.*

All development in the City, including the Project, is required to adhere to all City-adopted policy provisions, including those contained in the adopted CAP. The Project applicant must complete a checklist to confirm consistency with the CAP to the satisfaction of City staff. The City ensures all provisions of the CAP are incorporated into projects and their permits through development review and applications of conditions of approval as applicable.

As demonstrated above, the Project does not comply with all applicable reduction measures included in the CAP. As such, mitigation measure **GHG-1** is recommended.

Mitigation Measure GHG-1: The following measures shall be included in the Project design:

- Consistent with CAP Reduction Measure BE 1, the Project shall not include natural gas connections, natural gas appliances, or other natural gas equipment in the Project design.
- Consistent with CAP Reduction Measure RE 2, the Project shall include an on-site energy storage system, such as, but not limited to, a battery.
- Consistent with CAP Reduction Measure SW 1, the Project shall provide sufficient space in each unit to store and allow access to a compost bin.
- Consistent with CAP Reduction Measure WW 3, the Project shall include a greywater system to reduce water use.

BAAQMD Plan 2017 Clean Air Plan

The 2017 Clean Air Plan (BAAQMD 2017b) provides a regional strategy to protect public health and protect the climate. The 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG emissions reduction targets. The 2017 Clean Air Plan includes a wide range of control measures designed to reduce emissions of CH₄ and other 'super GHGs' in the near term, and to decrease emissions of CO₂ by reducing fossil-fuel combustion.

The 2017 Clean Air Plan includes a diverse range of control measures designed to decrease GHG emissions. Consistency of the Proposed Project with 2017 Clean Air Plan is demonstrated by assessing whether the Project supports all of the Project-applicable Clean Air Plan control measures for GHG emissions. The GHG-related control strategies of the Clean Air Plan include *Mobile Source Measures*, *Transportation Control Measures* and *Energy and Climate Measures*.

Note, the *Land Use and Local Impact Measures* address the exposure of sensitive receptors to toxic air contaminants and is thereby not applicable to this impact discussion of GHG emissions. Additionally, the Stationary Source Measures in the Clean Air Plan such as those implemented to control emissions from metal melting facilities, cement kilns, refineries, and glass furnaces are not applicable to the Proposed Project.

Transportation and Mobile Source Control Measures

The BAAQMD identifies transportation and mobile source control measures as part of the Clean Air Plan to reduce ozone precursor emissions from these sources. The transportation control measures are designed to reduce emissions from motor vehicles by reducing vehicle trips and vehicle miles traveled (VMT) in addition to vehicle idling and traffic congestion. The Proposed Project is consistent with the Clean Air Plan's transportation and mobile source control measures in that it is the redevelopment of an existing urban environment. The Project is considered "infill development" as it proposes to redevelop a build-out property and enhance the physical design of the urban environment. Under Public Resources Code (PRC) section 21061.3, an "infill site" is defined as a site that "has been previously developed for qualified urban uses." In turn, a "qualified urban use" is defined, pursuant to PRC section 21072, as "a residential, commercial, or public institutional, transit or transportation passenger facility, or retail use, or any combination of those uses." Additionally, the Project site is located in an "urbanized area," which is defined under PRC section 21071 as "an incorporated city" that meets the criteria of having a population of at least 100,000 persons.

The Proposed Project would be located in close proximity to two Caltrain stops, located on either end of Peninsula Office Park. One bus stop is located at the end of Campus Drive and the other is located at the junction of Campus Drive and Live Oak Drive; at a convenient location for residents. The public transit accessibility would result in fewer vehicle trips and VMT compared to the statewide average and encourage walking and non-automotive forms of transportation, thus resulting in the reduction of, or no increase in, transportation-related emissions.

The Project would also provide bike storage for residents within the garage of each dwelling, Sidewalks currently exist on the left and right sides of Campus Drive, and pedestrian crosswalks are included in the street design.

The Proposed Project would also provide convenient accessibility to nearby offices and various retail shops, restaurants, a grocery store, and more. These places of commerce and employment are conveniently located for the future residents of the Proposed Project to access via walking, biking, or a short vehicle trip, which will further reduce vehicle miles traveled.

These aspects of the Project would result in the generation of a reduced amount of GHG emissions. According to the USEPA, redevelopments (namely at brownfield sites) produce 32 to 57 percent less emissions per capita relative to conventional developments (EPA no date); this is because the number of daily vehicle trips and daily VMT associated with the redevelopment tend to be lower compared with development on vacant land. As a result, the Proposed Project would not conflict with the identified transportation and mobile source control measures of the Clean Air Plan.

Land Use and Local Impact Measures

The BAAQMD Clean Air Plan includes Land Use and Local Impact Measures to ensure that planned growth is focused in a way that protects the people and environment from exposure of emissions associated with stationary and mobile sources and to promote mixed-use, compact development to reduce motor vehicle travel. The Land Use and Local Impact Measures identified by the BAAQMD are not specifically applicable

to the Proposed Project as they relate to actions the BAAQMD will take to reduce impacts from goods movement and health risks in affected communities at the plan level. The measures also detail new regulatory actions the BAAQMD will undertake related to land use, including updates to the CEQA Air Quality Guidelines, and indirect source review.

However, the Proposed Project would be a redevelopment infill Project in support of these measures. For instance, the Project can be identified for its “location efficiency.” Location efficiency describes the location of the Project relative to the type of urban landscape its proposed to fit within, such as an “urban area,” “compact infill,” or “suburban center.” The Project site represents an urban/compact infill location within an area of the city developed with residential and commercial uses. The Project site is served by existing public transportation as previously described; it is within an active urban center surrounded with many existing offsite office, commercial, and residential buildings. The Project would locate additional residential land use in close proximity to existing offsite office, commercial, and residential uses. Therefore, the Project would provide future Project residents with the potential work opportunities and commercial service options in close proximity to the site. The location efficiency of the Project site would result in synergistic benefits that would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reduction of transport-related GHG emissions.

The Project would increase housing density in the vicinity over current conditions. Increased density reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies to reduce GHG emissions.

Energy and Climate Control Measures

The Clean Air Plan also includes Energy and Climate Control Measures, which are designed to reduce ambient concentrations of emissions of CO₂. Implementation of these measures is intended to promote energy conservation and efficiency in buildings throughout the community, promote renewable forms of energy production, reduce the “urban heat island” effect by increasing reflectivity of roofs and parking lots, promote the planting of (low volatile organic compound-emitting) trees to reduce biogenic emissions, lower air temperatures, provide shade, and absorb air pollutants. The measures include voluntary approaches to reduce the heat-island effect by increasing shade in urban and suburban areas through the planting of trees. The Proposed Project would increase landscaping through the Project site and would include trees to meet the landscaping requirements of the Municipal Code, which would help reduce the urban heat-island effect. In addition, the Proposed Project would include EV charging in compliance with the City Municipal Code. Furthermore, the proposed buildings would be built to the 2019 Title 24 Building Energy Efficiency Standards. Per the 2019 Building Energy Efficiency Standards, 100 percent of electricity use during Project operation must be generated from renewable energy; eliminating operational CO₂e emissions from the Project due to energy use.

The Project is consistent with the 2017 Clean Air Plan. The Proposed Project would conform to the Project-applicable control measures in the Clean Air Plan and would not disrupt or hinder the implementation of any other control measures.

ABAG Final Plan Bay Area 2040

ABAG's Plan Bay Area is the RTP/SCS for the San Francisco Bay Area. Plan Bay Area establishes GHG emissions goals for automobiles and light-duty trucks, a potent source of GHG emissions attributable to land use development. As previously described, ABAG was tasked by CARB to achieve a seven percent per capita reduction in mobile-source GHG emissions compared to 2005 vehicle emissions by 2020 and a 15 percent per capita reduction by 2035. Plan Bay Area 2013-2040 establishes an overall mechanism to achieve these GHG targets for the Project region consistent with both the target date of AB 32 (end of 2020) and the post-2020 GHG reduction goals of SB 32. CARB has confirmed the Project region will achieve its GHG reduction targets by implementing Plan Bay Area (CARB 2018). The RTP/SCS contains thousands of individual transportation projects, including highway improvements, railway electrification, bicycle lanes, new transit hubs, and replacement bridges. These future investments seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding. In addition, the RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve state GHG emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently.

Plan Bay Area 2040's core strategy is "focused growth" in existing communities along the existing transportation network. This strategy allows the best "bang for the buck" in achieving key regional economic, environmental, and equity goals: it builds upon existing community characteristics, efficiently leverages existing infrastructure, and mitigates impacts on areas with less development. The RTP/SCS identifies 200 "Priority Development Areas," which are areas focused for growth and development. Priority Development Areas are defined by the RTP/SCS as existing neighborhoods that are served by public transit and have been identified as appropriate for additional, compact development.

The Project site is located in an area identified as an Urbanized Area in the RTP/SCS. Because the Project site is an "Urbanized Area" in the RTP/SCS planning period as opposed to "Priority Conservation Area," it is included in an area where urban development currently exists and is also predicted and encouraged by ABAG. Furthermore, the Project is the replacement of existing office buildings with residential development within a built environment (infill development). The Project will increase density and land use diversity in the vicinity over current conditions. Increased density, measured in terms of persons, jobs, or building square footage, as well as increased land use diversity, potentially reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies such as enhanced transit services. The Project would increase the site density from 224,844 total square feet of office space to over 300,000 total square feet of residential building space.

For these reasons, the Project is consistent with Plan Bay Area. Based on the Project's proximity to public transportation, availability of bike storage space, proximity to retail stores, and TDM plan, it can be assumed that regional mobile emissions will decrease in line with the goals of Plan Bay Area with implementation of the Proposed Project. Implementing ABAG's RTP/SCS will greatly reduce the regional

GHG emissions from transportation, and the proposed Project will not obstruct the achievement of Plan Bay Area's emission reduction targets.

Contribution of Greenhouse Gas Emissions

Construction

Construction-related activities that would generate GHGs include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 2 illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

Table 2. Construction-Related Greenhouse Gas Emissions	
Emissions Source	CO₂e (Metric Tons/Year)
Construction 2021	913
Construction 2022	634
Project Construction Total	1,547

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emissions estimates account for the demolition of 224,844 total square feet of office space. Building construction, paving, and architectural coating assumed to occur simultaneously.

As shown in Table 2, Project construction (including demolition activities) would result in the generation of approximately 1,547 metric tons of CO₂e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. As previously stated, the BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. GHG emissions generated by the construction sector have been declining in recent years. For instance, construction equipment engine efficiency has continued to improve year after year. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower (hp) and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the USEPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 hp and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards. Tier 3 engine standards reduce precursor and subset GHG emissions such as nitrogen oxide by as much as 60 percent. On May 11, 2004, the USEPA signed the final rule introducing Tier 4 emission standards, which were phased in over the period of 2008-2015. The Tier 4 standards require that emissions of nitrogen oxide be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

In addition, the California Energy Commission recently released the 2019 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California

Energy Code). Both the 2016 and 2019 updates to the Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions, and alterations to existing buildings. For instance, effective January 1, 2017, owners/builders of construction projects have been required to divert (recycle) 65 percent of construction waste materials generated during the project construction phase. This requirement greatly reduces the generation of GHG emissions by reducing decomposition at landfills, which is a source of CH₄, and reducing demand for natural resources.

Operations

Operation of the Project would result in GHG emissions. Projected GHG emissions associated with proposed operations are quantified and compared to the existing baseline, which, as previously stated, includes four office buildings which total to 224,844 square feet. Table 3 summarizes all the direct and indirect annual GHG emissions associated with the Project.

Table 3. Operational Greenhouse Gas Emissions

Emission Source	CO ₂ e (Metric Tons/Year)
Proposed Project	
Area Source (landscaping, hearth)	30
Energy	255
Mobile	1,563
Waste	95
Water	37
Total	1,980
Existing Onsite Land Uses	
Area Source (landscaping, hearth)	0
Energy	615
Mobile	1,699
Waste	105
Water	94
Total	2,513
Difference	
Area Source (landscaping, hearth)	+30
Energy	-360
Mobile	-136
Waste	-10
Water	-57
Total	-533
BAAQMD Bright-Line Significance Threshold	660
Exceed BAAQMD Daily Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emissions projections account for baseline and Project trip generation rates identified by Kittelson & Associates (2020).

As shown in Table 3, the new Project would result in a *decrease* in operational emissions from the baseline level by 533 metric tons of CO₂e per year. This is largely due to the improved energy efficiency standards which came into effect in 2020. The Project does not exceed the adjusted 2030 bright-line threshold of 660 metric tons of CO₂e per year.

Cumulative GHG Impacts

Climate change is a global problem, and GHGs are global pollutants unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have much longer atmospheric lifetimes of one year to several thousand years that allow them to be dispersed around the globe.

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of Project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. As previously discussed, the Proposed Project would not conflict with the City CAP, the BAAQMD 2017 Clean Air Plan, or Plan Bay Area, the RTP/SCS for the Bay Area. As a result, the Project would not conflict with any GHG reduction plans. Therefore, the Project's cumulative contribution of GHG emissions would be less than significant and the Project's cumulative GHG impacts would also be less than cumulatively considerable.

3.0 REFERENCES

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ATTACHMENT A

CalEEMod Output Files –Greenhouse Gas Emissions

Peninsula Heights- Project - San Mateo County, Annual

Peninsula Heights- Project
San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	10.00	1000sqft	0.23	10,000.00	0
Other Non-Asphalt Surfaces	282.64	1000sqft	6.49	282,644.00	0
Parking Lot	37.00	Space	0.33	14,800.00	0
Condo/Townhouse	216.00	Dwelling Unit	4.40	191,644.00	618
Single Family Housing	74.00	Dwelling Unit	4.00	174,240.00	212

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	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Peninsula Heights- Project - San Mateo County, Annual

Project Characteristics - The current PG&E CO2 intensity factor is 290 lb/MWh.

Land Use - Other non-asphalt surfaces represents open space. Open space comprises 42% of the total 15.45 acre site. Lot acreage and square footage adjusted to match the project area described in the project description.

Construction Phase - Building construction, paving, and painting will occur simultaneously.

Demolition -

Vehicle Trips - Traffic based on the final Kittleson & Associates TIS (2020)

Energy Use - The 2019 Building Energy Efficiency Standards require 100% of energy use during operation to be generated from renewable energy.

Energy Mitigation - The 2019 Building Energy Efficiency Standards require 100% of energy use during operation to be generated from renewable energy.

Water Mitigation - The Project is required to comply with California water efficiency standards.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	300.00
tblConstructionPhase	NumDays	20.00	300.00
tblLandUse	LandUseSquareFeet	282,640.00	282,644.00
tblLandUse	LandUseSquareFeet	216,000.00	191,644.00
tblLandUse	LandUseSquareFeet	133,200.00	174,240.00
tblLandUse	LotAcreage	13.50	4.40
tblLandUse	LotAcreage	24.03	4.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	5.67	8.68
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	SU_TR	4.84	8.68
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	WD_TR	5.81	8.68
tblVehicleTrips	WD_TR	9.52	0.00

2.0 Emissions Summary

Peninsula Heights- Project - San Mateo County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Year	tons/yr										MT/yr						
2021	1.8978	4.6425	4.3566	0.0100	0.6305	0.1975	0.8280	0.2011	0.1840	0.3851	0.0000	909.6319	909.6319	0.1630	0.0000	913.7067	
2022	1.5256	2.5665	3.0002	6.9800e-003	0.2508	0.1046	0.3554	0.0676	0.0979	0.1655	0.0000	632.1786	632.1786	0.1009	0.0000	634.7015	
Maximum	1.8978	4.6425	4.3566	0.0100	0.6305	0.1975	0.8280	0.2011	0.1840	0.3851	0.0000	909.6319	909.6319	0.1630	0.0000	913.7067	

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Year	tons/yr											MT/yr					
2021	1.8978	4.6425	4.3566	0.0100	0.6305	0.1975	0.8280	0.2011	0.1840	0.3851	0.0000	909.6313	909.6313	0.1630	0.0000	913.7061	
2022	1.5256	2.5665	3.0002	6.9800e-003	0.2508	0.1046	0.3554	0.0676	0.0979	0.1655	0.0000	632.1782	632.1782	0.1009	0.0000	634.7011	
Maximum	1.8978	4.6425	4.3566	0.0100	0.6305	0.1975	0.8280	0.2011	0.1840	0.3851	0.0000	909.6313	909.6313	0.1630	0.0000	913.7061	

Peninsula Heights- Project - San Mateo County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2021	5-31-2021	1.6756	1.6756
2	6-1-2021	8-31-2021	2.0697	2.0697
3	9-1-2021	11-30-2021	2.0554	2.0554
4	12-1-2021	2-28-2022	1.9370	1.9370
5	3-1-2022	5-31-2022	1.9188	1.9188
6	6-1-2022	8-31-2022	0.9366	0.9366
		Highest	2.0697	2.0697

2.2 Overall OperationalUnmitigated 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	2.7127	0.0459	3.4791	2.7900e-003		0.2015	0.2015		0.2015	0.2015	19.2536	9.8776	29.1312	0.0370	1.1800e-003	30.4090	
Energy	0.0434	0.3704	0.1576	2.3600e-003		0.0300	0.0300		0.0300	0.0300	0.0000	649.4747	649.4747	0.0303	0.0124	653.9345	
Mobile	0.4357	1.3312	4.9125	0.0171	1.6055	0.0144	1.6198	0.4315	0.0134	0.4448	0.0000	1,561.4151	1,561.4151	0.0564	0.0000	1,562.8259	
Waste						0.0000	0.0000		0.0000	0.0000	38.2435	0.0000	38.2435	2.2601	0.0000	94.7467	
Water						0.0000	0.0000		0.0000	0.0000	5.9944	18.9329	24.9273	0.6176	0.0149	44.8156	
Total	3.1918	1.7475	8.5493	0.0222	1.6055	0.2458	1.8513	0.4315	0.2448	0.6763	63.4915	2,239.7002	2,303.1917	3.0014	0.0285	2,386.7317	

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Area	2.7127	0.0459	3.4791	2.7900e-003		0.2015	0.2015		0.2015	0.2015	19.2536	9.8776	29.1312	0.0370	1.1800e-003	30.4090	
Energy	4.0900e-003	0.0349	0.0149	2.2000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	253.0052	253.0052	0.0220	5.1400e-003	255.0874	
Mobile	0.4357	1.3312	4.9125	0.0171	1.6055	0.0144	1.6198	0.4315	0.0134	0.4448	0.0000	1,561.4151	1,561.4151	0.0564	0.0000	1,562.8259	
Waste						0.0000	0.0000		0.0000	0.0000	38.2435	0.0000	38.2435	2.2601	0.0000	94.7467	
Water						0.0000	0.0000		0.0000	0.0000	4.7955	15.9086	20.7041	0.4941	0.0120	36.6214	
Total	3.1525	1.4120	8.4065	0.0201	1.6055	0.2187	1.8242	0.4315	0.2177	0.6492	62.2926	1,840.2065	1,902.4991	2.8697	0.0183	1,979.6904	

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	1.23	19.20	1.67	9.64	0.00	11.03	1.46	0.00	11.08	4.01	1.89	17.84	17.40	4.39	35.95	17.05

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2021	3/26/2021	5	20	
2	Site Preparation	Site Preparation	3/27/2021	4/9/2021	5	10	
3	Grading	Grading	4/10/2021	5/21/2021	5	30	
4	Building Construction	Building Construction	5/22/2021	7/15/2022	5	300	
5	Paving	Paving	5/22/2021	7/15/2022	5	300	
6	Architectural Coating	Architectural Coating	5/22/2021	7/15/2022	5	300	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 7.05

Residential Indoor: 740,915; Residential Outdoor: 246,972; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 18,447 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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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	6	15.00	0.00	1,023.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	311.00	81.00	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	62.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Fugitive Dust					0.1107	0.0000	0.1107	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0317	0.3144	0.2157	3.9000e-004	0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	0.0000	34.2400	
Total	0.0317	0.3144	0.2157	3.9000e-004	0.1107	0.0155	0.1262	0.0168	0.0144	0.0312	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400	

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3.2 Demolition - 2021**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	4.3200e-003	0.1522	0.0712	4.1000e-004	8.5600e-003	4.6000e-004	9.0200e-003	2.3500e-003	4.4000e-004	2.7900e-003	0.0000	42.0113	42.0113	5.3800e-003	0.0000	42.1458	
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	3.8000e-004	2.5000e-004	2.7000e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9483	0.9483	2.0000e-005	0.0000	0.9488	
Total	4.7000e-003	0.1524	0.0739	4.2000e-004	9.7400e-003	4.7000e-004	0.0102	2.6600e-003	4.5000e-004	3.1100e-003	0.0000	42.9596	42.9596	5.4000e-003	0.0000	43.0945	

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					0.1107	0.0000	0.1107	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400	
Total	0.0317	0.3144	0.2157	3.9000e-004	0.1107	0.0155	0.1262	0.0168	0.0144	0.0312	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400	

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3.2 Demolition - 2021**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	4.3200e-003	0.1522	0.0712	4.1000e-004	8.5600e-003	4.6000e-004	9.0200e-003	2.3500e-003	4.4000e-004	2.7900e-003	0.0000	42.0113	42.0113	5.3800e-003	0.0000	42.1458	
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	3.8000e-004	2.5000e-004	2.7000e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9483	0.9483	2.0000e-005	0.0000	0.9488	
Total	4.7000e-003	0.1524	0.0739	4.2000e-004	9.7400e-003	4.7000e-004	0.0102	2.6600e-003	4.5000e-004	3.1100e-003	0.0000	42.9596	42.9596	5.4000e-003	0.0000	43.0945	

3.3 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	0.0194	0.2025	0.1058	1.9000e-004	0.0903	0.0102	0.1006	0.0497	9.4000e-003	0.0591	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530

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3.3 Site Preparation - 2021**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	2.3000e-004	1.5000e-004	1.6200e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5690	0.5690	1.0000e-005	0.0000	0.5693	
Total	2.3000e-004	1.5000e-004	1.6200e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5690	0.5690	1.0000e-005	0.0000	0.5693	

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530	
Total	0.0194	0.2025	0.1058	1.9000e-004	0.0903	0.0102	0.1006	0.0497	9.4000e-003	0.0591	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530	

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3.3 Site Preparation - 2021**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	2.3000e-004	1.5000e-004	1.6200e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5690	0.5690	1.0000e-005	0.0000	0.5693	
Total	2.3000e-004	1.5000e-004	1.6200e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5690	0.5690	1.0000e-005	0.0000	0.5693	

3.4 Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0629	0.6960	0.4632	9.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	81.7425	81.7425	0.0264	0.0000	82.4034
Total	0.0629	0.6960	0.4632	9.3000e-004	0.1301	0.0298	0.1599	0.0540	0.0274	0.0814	0.0000	81.7425	81.7425	0.0264	0.0000	82.4034

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3.4 Grading - 2021**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	7.6000e-004	5.0000e-004	5.3900e-003	2.0000e-005	2.3600e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.8966	1.8966	3.0000e-005	0.0000	1.8975	
Total	7.6000e-004	5.0000e-004	5.3900e-003	2.0000e-005	2.3600e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.8966	1.8966	3.0000e-005	0.0000	1.8975	

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					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0629	0.6960	0.4632	9.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	81.7424	81.7424	0.0264	0.0000	82.4033	
Total	0.0629	0.6960	0.4632	9.3000e-004	0.1301	0.0298	0.1599	0.0540	0.0274	0.0814	0.0000	81.7424	81.7424	0.0264	0.0000	82.4033	

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3.4 Grading - 2021**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	7.6000e-004	5.0000e-004	5.3900e-003	2.0000e-005	2.3600e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.8966	1.8966	3.0000e-005	0.0000	1.8975	
Total	7.6000e-004	5.0000e-004	5.3900e-003	2.0000e-005	2.3600e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.8966	1.8966	3.0000e-005	0.0000	1.8975	

3.5 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Off-Road	0.1521	1.3946	1.3260	2.1500e-003		0.0767	0.0767		0.0721	0.0721	0.0000	185.3098	185.3098	0.0447	0.0000	186.4275	
Total	0.1521	1.3946	1.3260	2.1500e-003		0.0767	0.0767		0.0721	0.0721	0.0000	185.3098	185.3098	0.0447	0.0000	186.4275	

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3.5 Building Construction - 2021**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	0.0207	0.6749	0.2896	1.7000e-003	0.0422	1.5500e-003	0.0438	0.0122	1.4800e-003	0.0137	0.0000	169.5837	169.5837	0.0147	0.0000	169.9501	
Worker	0.0634	0.0413	0.4471	1.7400e-003	0.1959	1.1900e-003	0.1971	0.0521	1.1000e-003	0.0532	0.0000	157.2940	157.2940	2.8600e-003	0.0000	157.3654	
Total	0.0841	0.7161	0.7367	3.4400e-003	0.2381	2.7400e-003	0.2409	0.0643	2.5800e-003	0.0669	0.0000	326.8777	326.8777	0.0175	0.0000	327.3155	

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	0.1521	1.3946	1.3260	2.1500e-003		0.0767	0.0767		0.0721	0.0721	0.0000	185.3096	185.3096	0.0447	0.0000	186.4273	
Total	0.1521	1.3946	1.3260	2.1500e-003		0.0767	0.0767		0.0721	0.0721	0.0000	185.3096	185.3096	0.0447	0.0000	186.4273	

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3.5 Building Construction - 2021**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	0.0207	0.6749	0.2896	1.7000e-003	0.0422	1.5500e-003	0.0438	0.0122	1.4800e-003	0.0137	0.0000	169.5837	169.5837	0.0147	0.0000	169.9501	
Worker	0.0634	0.0413	0.4471	1.7400e-003	0.1959	1.1900e-003	0.1971	0.0521	1.1000e-003	0.0532	0.0000	157.2940	157.2940	2.8600e-003	0.0000	157.3654	
Total	0.0841	0.7161	0.7367	3.4400e-003	0.2381	2.7400e-003	0.2409	0.0643	2.5800e-003	0.0669	0.0000	326.8777	326.8777	0.0175	0.0000	327.3155	

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	0.1194	1.0931	1.1454	1.8900e-003		0.0566	0.0566		0.0533	0.0533	0.0000	162.2077	162.2077	0.0389	0.0000	163.1792	
Total	0.1194	1.0931	1.1454	1.8900e-003		0.0566	0.0566		0.0533	0.0533	0.0000	162.2077	162.2077	0.0389	0.0000	163.1792	

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3.5 Building Construction - 2022**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	0.0170	0.5554	0.2531	1.4600e-003	0.0370	1.1900e-003	0.0382	0.0107	1.1400e-003	0.0118	0.0000	146.4776	146.4776	0.0127	0.0000	146.7960	
Worker	0.0524	0.0326	0.3640	1.4600e-003	0.1714	1.0200e-003	0.1724	0.0456	9.4000e-004	0.0466	0.0000	132.5979	132.5979	2.2500e-003	0.0000	132.6543	
Total	0.0694	0.5880	0.6171	2.9200e-003	0.2083	2.2100e-003	0.2106	0.0563	2.0800e-003	0.0584	0.0000	279.0755	279.0755	0.0150	0.0000	279.4503	

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	0.1194	1.0931	1.1454	1.8900e-003		0.0566	0.0566		0.0533	0.0533	0.0000	162.2075	162.2075	0.0389	0.0000	163.1790	
Total	0.1194	1.0931	1.1454	1.8900e-003		0.0566	0.0566		0.0533	0.0533	0.0000	162.2075	162.2075	0.0389	0.0000	163.1790	

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3.5 Building Construction - 2022**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	0.0170	0.5554	0.2531	1.4600e-003	0.0370	1.1900e-003	0.0382	0.0107	1.1400e-003	0.0118	0.0000	146.4776	146.4776	0.0127	0.0000	146.7960	
Worker	0.0524	0.0326	0.3640	1.4600e-003	0.1714	1.0200e-003	0.1724	0.0456	9.4000e-004	0.0466	0.0000	132.5979	132.5979	2.2500e-003	0.0000	132.6543	
Total	0.0694	0.5880	0.6171	2.9200e-003	0.2083	2.2100e-003	0.2106	0.0563	2.0800e-003	0.0584	0.0000	279.0755	279.0755	0.0150	0.0000	279.4503	

3.6 Paving - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1004	1.0335	1.1723	1.8200e-003		0.0542	0.0542		0.0499	0.0499	0.0000	160.1878	160.1878	0.0518	0.0000	161.4830
Paving	3.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1008	1.0335	1.1723	1.8200e-003		0.0542	0.0542		0.0499	0.0499	0.0000	160.1878	160.1878	0.0518	0.0000	161.4830

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3.6 Paving - 2021**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	3.0600e-003	1.9900e-003	0.0216	8.0000e-005	9.4500e-003	6.0000e-005	9.5000e-003	2.5100e-003	5.0000e-005	2.5700e-003	0.0000	7.5865	7.5865	1.4000e-004	0.0000	7.5900	
Total	3.0600e-003	1.9900e-003	0.0216	8.0000e-005	9.4500e-003	6.0000e-005	9.5000e-003	2.5100e-003	5.0000e-005	2.5700e-003	0.0000	7.5865	7.5865	1.4000e-004	0.0000	7.5900	

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	0.1004	1.0335	1.1723	1.8200e-003		0.0542	0.0542		0.0499	0.0499	0.0000	160.1877	160.1877	0.0518	0.0000	161.4829	
Paving	3.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total	0.1008	1.0335	1.1723	1.8200e-003		0.0542	0.0542		0.0499	0.0499	0.0000	160.1877	160.1877	0.0518	0.0000	161.4829	

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3.6 Paving - 2021**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	3.0600e-003	1.9900e-003	0.0216	8.0000e-005	9.4500e-003	6.0000e-005	9.5000e-003	2.5100e-003	5.0000e-005	2.5700e-003	0.0000	7.5865	7.5865	1.4000e-004	0.0000	7.5900	
Total	3.0600e-003	1.9900e-003	0.0216	8.0000e-005	9.4500e-003	6.0000e-005	9.5000e-003	2.5100e-003	5.0000e-005	2.5700e-003	0.0000	7.5865	7.5865	1.4000e-004	0.0000	7.5900	

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	0.0772	0.7787	1.0206	1.6000e-003		0.0398	0.0398		0.0366	0.0366	0.0000	140.1929	140.1929	0.0453	0.0000	141.3264
Paving	3.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0775	0.7787	1.0206	1.6000e-003		0.0398	0.0398		0.0366	0.0366	0.0000	140.1929	140.1929	0.0453	0.0000	141.3264

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3.6 Paving - 2022**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	2.5300e-003	1.5700e-003	0.0176	7.0000e-005	8.2700e-003	5.0000e-005	8.3200e-003	2.2000e-003	5.0000e-005	2.2500e-003	0.0000	6.3954	6.3954	1.1000e-004	0.0000	6.3981	
Total	2.5300e-003	1.5700e-003	0.0176	7.0000e-005	8.2700e-003	5.0000e-005	8.3200e-003	2.2000e-003	5.0000e-005	2.2500e-003	0.0000	6.3954	6.3954	1.1000e-004	0.0000	6.3981	

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	0.0772	0.7787	1.0206	1.6000e-003		0.0398	0.0398		0.0366	0.0366	0.0000	140.1927	140.1927	0.0453	0.0000	141.3263	
Paving	3.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total	0.0775	0.7787	1.0206	1.6000e-003		0.0398	0.0398		0.0366	0.0366	0.0000	140.1927	140.1927	0.0453	0.0000	141.3263	

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3.6 Paving - 2022**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	2.5300e-003	1.5700e-003	0.0176	7.0000e-005	8.2700e-003	5.0000e-005	8.3200e-003	2.2000e-003	5.0000e-005	2.2500e-003	0.0000	6.3954	6.3954	1.1000e-004	0.0000	6.3981	
Total	2.5300e-003	1.5700e-003	0.0176	7.0000e-005	8.2700e-003	5.0000e-005	8.3200e-003	2.2000e-003	5.0000e-005	2.2500e-003	0.0000	6.3954	6.3954	1.1000e-004	0.0000	6.3981	

3.7 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4079						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0175	0.1222	0.1454	2.4000e-004		7.5300e-003	7.5300e-003		7.5300e-003	7.5300e-003	0.0000	20.4260	20.4260	1.4000e-003	0.0000	20.4611
Total	1.4254	0.1222	0.1454	2.4000e-004		7.5300e-003	7.5300e-003		7.5300e-003	7.5300e-003	0.0000	20.4260	20.4260	1.4000e-003	0.0000	20.4611

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3.7 Architectural Coating - 2021**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	0.0127	8.2300e-003	0.0891	3.5000e-004	0.0391	2.4000e-004	0.0393	0.0104	2.2000e-004	0.0106	0.0000	31.3577	31.3577	5.7000e-004	0.0000	31.3719	
Total	0.0127	8.2300e-003	0.0891	3.5000e-004	0.0391	2.4000e-004	0.0393	0.0104	2.2000e-004	0.0106	0.0000	31.3577	31.3577	5.7000e-004	0.0000	31.3719	

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	1.4079						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0175	0.1222	0.1454	2.4000e-004		7.5300e-003	7.5300e-003		7.5300e-003	7.5300e-003	0.0000	20.4260	20.4260	1.4000e-003	0.0000	20.4611	
Total	1.4254	0.1222	0.1454	2.4000e-004		7.5300e-003	7.5300e-003		7.5300e-003	7.5300e-003	0.0000	20.4260	20.4260	1.4000e-003	0.0000	20.4611	

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3.7 Architectural Coating - 2021**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	0.0127	8.2300e-003	0.0891	3.5000e-004	0.0391	2.4000e-004	0.0393	0.0104	2.2000e-004	0.0106	0.0000	31.3577	31.3577	5.7000e-004	0.0000	31.3719	
Total	0.0127	8.2300e-003	0.0891	3.5000e-004	0.0391	2.4000e-004	0.0393	0.0104	2.2000e-004	0.0106	0.0000	31.3577	31.3577	5.7000e-004	0.0000	31.3719	

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	1.2319						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0143	0.0986	0.1270	2.1000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	17.8728	17.8728	1.1600e-003	0.0000	17.9019	
Total	1.2462	0.0986	0.1270	2.1000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	17.8728	17.8728	1.1600e-003	0.0000	17.9019	

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3.7 Architectural Coating - 2022**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	0.0105	6.5000e-003	0.0726	2.9000e-004	0.0342	2.0000e-004	0.0344	9.0900e-003	1.9000e-004	9.2800e-003	0.0000	26.4343	26.4343	4.5000e-004	0.0000	26.4456	
Total	0.0105	6.5000e-003	0.0726	2.9000e-004	0.0342	2.0000e-004	0.0344	9.0900e-003	1.9000e-004	9.2800e-003	0.0000	26.4343	26.4343	4.5000e-004	0.0000	26.4456	

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	1.2319						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0143	0.0986	0.1270	2.1000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	17.8728	17.8728	1.1600e-003	0.0000	17.9019	
Total	1.2462	0.0986	0.1270	2.1000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	17.8728	17.8728	1.1600e-003	0.0000	17.9019	

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3.7 Architectural Coating - 2022**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	0.0105	6.5000e-003	0.0726	2.9000e-004	0.0342	2.0000e-004	0.0344	9.0900e-003	1.9000e-004	9.2800e-003	0.0000	26.4343	26.4343	4.5000e-004	0.0000	26.4456	
Total	0.0105	6.5000e-003	0.0726	2.9000e-004	0.0342	2.0000e-004	0.0344	9.0900e-003	1.9000e-004	9.2800e-003	0.0000	26.4343	26.4343	4.5000e-004	0.0000	26.4456	

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.4357	1.3312	4.9125	0.0171	1.6055	0.0144	1.6198	0.4315	0.0134	0.4448	0.0000	1,561.415	1,561.415	0.0564	0.0000	1,562.825	
Unmitigated	0.4357	1.3312	4.9125	0.0171	1.6055	0.0144	1.6198	0.4315	0.0134	0.4448	0.0000	1,561.415	1,561.415	0.0564	0.0000	1,562.825	

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Condo/Townhouse	1,874.88	1,874.88	1874.88	4,330,237	4,330,237	4,330,237	4,330,237
Other Asphalt Surfaces	0.00	0.00	0.00				
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
Parking Lot	0.00	0.00	0.00				
Single Family Housing	0.00	0.00	0.00				
Total	1,874.88	1,874.88	1,874.88	4,330,237	4,330,237	4,330,237	4,330,237

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	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
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Single Family Housing	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

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	212.5368	212.5368	0.0213	4.4000e-003	214.3785
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	220.4667	220.4667	0.0221	4.5600e-003	222.3772
NaturalGas Mitigated	4.0900e-003	0.0349	0.0149	2.2000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	40.4684	40.4684	7.8000e-004	7.4000e-004	40.7089
NaturalGas Unmitigated	0.0434	0.3704	0.1576	2.3600e-003		0.0300	0.0300		0.0300	0.0300	0.0000	429.0080	429.0080	8.2200e-003	7.8700e-003	431.5573

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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					
Condo/Townhouse	4.90735e+006	0.0265	0.2261	0.0962	1.4400e-003		0.0183	0.0183		0.0183	0.0183	0.0000	261.8747	261.8747	5.0200e-003	4.8000e-003	263.4309
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
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
Single Family Housing	3.13196e+006	0.0169	0.1443	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.1332	167.1332	3.2000e-003	3.0600e-003	168.1264
Total		0.0434	0.3704	0.1576	2.3600e-003		0.0300	0.0300		0.0300	0.0300	0.0000	429.0080	429.0080	8.2200e-003	7.8600e-003	431.5573

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5.2 Energy by Land Use - NaturalGas**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					
Condo/Townhouse	564840	3.0500e-003	0.0260	0.0111	1.7000e-004		2.1000e-003	2.1000e-003		2.1000e-003	2.1000e-003	0.0000	30.1420	30.1420	5.8000e-004	5.5000e-004	30.3211
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
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
Single Family Housing	193510	1.0400e-003	8.9200e-003	3.7900e-003	6.0000e-005		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004	0.0000	10.3264	10.3264	2.0000e-004	1.9000e-004	10.3878
Total		4.0900e-003	0.0350	0.0149	2.3000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	40.4684	40.4684	7.8000e-004	7.4000e-004	40.7089

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	1.08014e+006	142.0830	0.0142	2.9400e-003	143.3143
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	5180	0.6814	7.0000e-005	1.0000e-005	0.6873
Single Family Housing	590704	77.7023	7.7700e-003	1.6100e-003	78.3756
Total	220.4667	0.0221	4.5600e-003		222.3772

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	1.03596e+006	136.2720	0.0136	2.8200e-003	137.4529
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	5180	0.6814	7.0000e-005	1.0000e-005	0.6873
Single Family Housing	574596	75.5834	7.5600e-003	1.5600e-003	76.2384
Total		212.5368	0.0213	4.3900e-003	214.3785

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.7127	0.0459	3.4791	2.7900e-003		0.2015	0.2015		0.2015	0.2015	19.2536	9.8776	29.1312	0.0370	1.1800e-003	30.4090
Unmitigated	2.7127	0.0459	3.4791	2.7900e-003		0.2015	0.2015		0.2015	0.2015	19.2536	9.8776	29.1312	0.0370	1.1800e-003	30.4090

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	0.2640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4488					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.9345	0.0210	1.3205	2.6700e-003		0.1896	0.1896		0.1896	0.1896	19.2536	6.3543	25.6079	0.0336	1.1800e-003	26.8006
Landscaping	0.0654	0.0249	2.1586	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5232	3.5232	3.4100e-003	0.0000	3.6085
Total	2.7127	0.0459	3.4791	2.7800e-003		0.2015	0.2015		0.2015	0.2015	19.2536	9.8776	29.1312	0.0370	1.1800e-003	30.4090

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4488					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.9345	0.0210	1.3205	2.6700e-003		0.1896	0.1896		0.1896	0.1896	19.2536	6.3543	25.6079	0.0336	1.1800e-003	26.8006
Landscaping	0.0654	0.0249	2.1586	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5232	3.5232	3.4100e-003	0.0000	3.6085
Total	2.7127	0.0459	3.4791	2.7800e-003		0.2015	0.2015		0.2015	0.2015	19.2536	9.8776	29.1312	0.0370	1.1800e-003	30.4090

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	20.7041	0.4941	0.0120	36.6214
Unmitigated	24.9273	0.6176	0.0149	44.8156

7.2 Water by Land Use

Unmitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhous e	14.0733 / 8.87228	18.5665	0.4600	0.0111	33.3799
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	4.8214 / 3.03958	6.3608	0.1576	3.8100e- 003	11.4357
Total		24.9273	0.6176	0.0149	44.8156

7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhous e	11.2586 / 8.33107	15.4210	0.3681	8.9100e- 003	27.2766
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non- Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3.85712 / 2.85416	5.2831	0.1261	3.0500e- 003	9.3448
Total		20.7041	0.4941	0.0120	36.6214

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

	Total CO2	CH4	N2O	CO2e
MT/yr				
Mitigated	38.2435	2.2601	0.0000	94.7467
Unmitigated	38.2435	2.2601	0.0000	94.7467

8.2 Waste by Land UseUnmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	99.36	20.1692	1.1920	0.0000	49.9683
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	89.04	18.0743	1.0682	0.0000	44.7784
Total		38.2435	2.2601	0.0000	94.7466

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	99.36	20.1692	1.1920	0.0000	49.9683
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	89.04	18.0743	1.0682	0.0000	44.7784
Total		38.2435	2.2601	0.0000	94.7466

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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11.0 Vegetation

Peninsula Heights Emissions Assessment- Baseline - San Mateo County, Annual

Peninsula Heights Emissions Assessment- Baseline
San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	224.84	1000sqft	5.16	224,844.00	0
Parking Lot	5.00	Acre	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2012
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - The current PGE CO2 intensity factor is 290 lb/Mwh.

Land Use - Actual building square footage

Vehicle Trips - Traffic is based on the Kittleson & Assoc. TIS (2020)

Energy Use -

Peninsula Heights Emissions Assessment- Baseline - San Mateo County, Annual

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	224,840.00	224,844.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	2.46	7.14
tblVehicleTrips	SU_TR	1.05	7.14
tblVehicleTrips	WD_TR	11.03	7.14

2.0 Emissions Summary

Peninsula Heights Emissions Assessment- Baseline - San Mateo County, Annual

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						
2010	0.8692	6.9798	4.6752	7.2400e-003	0.3830	0.3875	0.7705	0.1478	0.3644	0.5123	0.0000	678.6224	678.6224	0.1344	0.0000	681.9826	
2011	3.1327	3.5547	2.5488	4.0800e-003	0.1093	0.2034	0.3127	0.0298	0.1921	0.2219	0.0000	379.7085	379.7085	0.0673	0.0000	381.3906	
Maximum	3.1327	6.9798	4.6752	7.2400e-003	0.3830	0.3875	0.7705	0.1478	0.3644	0.5123	0.0000	678.6224	678.6224	0.1344	0.0000	681.9826	

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						
2010	0.8692	6.9798	4.6752	7.2400e-003	0.3830	0.3875	0.7705	0.1478	0.3644	0.5123	0.0000	678.6219	678.6219	0.1344	0.0000	681.9822	
2011	3.1327	3.5547	2.5488	4.0800e-003	0.1093	0.2034	0.3127	0.0298	0.1921	0.2219	0.0000	379.7083	379.7083	0.0673	0.0000	381.3904	
Maximum	3.1327	6.9798	4.6752	7.2400e-003	0.3830	0.3875	0.7705	0.1478	0.3644	0.5123	0.0000	678.6219	678.6219	0.1344	0.0000	681.9822	

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-1-2010	4-30-2010	2.3985	2.3985
2	5-1-2010	7-31-2010	2.0078	2.0078
3	8-1-2010	10-31-2010	2.0206	2.0206
4	11-1-2010	1-31-2011	2.0360	2.0360
5	2-1-2011	4-30-2011	1.9391	1.9391
6	5-1-2011	7-31-2011	2.9100	2.9100
7	8-1-2011	9-30-2011	1.1549	1.1549
		Highest	2.9100	2.9100

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	0.8970	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1100e-003	4.1100e-003	1.0000e-005	0.0000	4.4400e-003		
Energy	0.0234	0.2131	0.1790	1.2800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	611.0723	611.0723	0.0424	0.0121	615.7360		
Mobile	0.9519	2.9973	11.2421	0.0187	1.4251	0.0553	1.4804	0.3834	0.0525	0.4360	0.0000	1,697.2980	1,697.2980	0.1027	0.0000	1,699.8648		
Waste						0.0000	0.0000		0.0000	0.0000	42.4454	0.0000	42.4454	2.5085	0.0000	105.1567		
Water						0.0000	0.0000		0.0000	0.0000	12.6780	39.7199	52.3979	1.3061	0.0316	94.4584		
Total	1.8723	3.2104	11.4233	0.0200	1.4251	0.0715	1.4966	0.3834	0.0687	0.4522	55.1234	2,348.0944	2,403.2178	3.9596	0.0437	2,515.2203		

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Area	0.8970	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1100e-003	4.1100e-003	1.0000e-005	0.0000	4.4400e-003	
Energy	0.0234	0.2131	0.1790	1.2800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	611.0723	611.0723	0.0424	0.0121	615.7360	
Mobile	0.9519	2.9973	11.2421	0.0187	1.4251	0.0553	1.4804	0.3834	0.0525	0.4360	0.0000	1,697.2980	1,697.2980	0.1027	0.0000	1,699.8648	
Waste						0.0000	0.0000		0.0000	0.0000	42.4454	0.0000	42.4454	2.5085	0.0000	105.1567	
Water						0.0000	0.0000		0.0000	0.0000	12.6780	39.7199	52.3979	1.3061	0.0316	94.4584	
Total	1.8723	3.2104	11.4233	0.0200	1.4251	0.0715	1.4966	0.3834	0.0687	0.4522	55.1234	2,348.0944	2,403.2178	3.9596	0.0437	2,515.2203	

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2010	2/26/2010	5	20	
2	Site Preparation	Site Preparation	2/27/2010	3/12/2010	5	10	
3	Grading	Grading	3/13/2010	4/23/2010	5	30	
4	Building Construction	Building Construction	4/24/2010	6/17/2011	5	300	
5	Paving	Paving	6/18/2011	7/15/2011	5	20	
6	Architectural Coating	Architectural Coating	7/16/2011	8/12/2011	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 337,266; Non-Residential Outdoor: 112,422; Striped Parking Area: 13,068 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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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	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	163.00	73.00	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	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2010

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	0.0506	0.5405	0.2341	3.9000e-004		0.0290	0.0290		0.0271	0.0271	0.0000	37.1985	37.1985	0.0101	0.0000	37.4519
Total	0.0506	0.5405	0.2341	3.9000e-004		0.0290	0.0290		0.0271	0.0271	0.0000	37.1985	37.1985	0.0101	0.0000	37.4519

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3.2 Demolition - 2010**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	1.2500e-003	1.1200e-003	0.0104	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.2465	1.2465	8.0000e-005	0.0000	1.2484	
Total	1.2500e-003	1.1200e-003	0.0104	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.2465	1.2465	8.0000e-005	0.0000	1.2484	

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	0.0506	0.5405	0.2341	3.9000e-004		0.0290	0.0290		0.0271	0.0271	0.0000	37.1985	37.1985	0.0101	0.0000	37.4518	
Total	0.0506	0.5405	0.2341	3.9000e-004		0.0290	0.0290		0.0271	0.0271	0.0000	37.1985	37.1985	0.0101	0.0000	37.4518	

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3.2 Demolition - 2010**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	1.2500e-003	1.1200e-003	0.0104	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.2465	1.2465	8.0000e-005	0.0000	1.2484	
Total	1.2500e-003	1.1200e-003	0.0104	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.2465	1.2465	8.0000e-005	0.0000	1.2484	

3.3 Site Preparation - 2010**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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0269	0.2949	0.1188	1.9000e-004		0.0167	0.0167		0.0153	0.0153	0.0000	18.6460	18.6460	5.4300e-003	0.0000	18.7817
Total	0.0269	0.2949	0.1188	1.9000e-004	0.0903	0.0167	0.1070	0.0497	0.0153	0.0650	0.0000	18.6460	18.6460	5.4300e-003	0.0000	18.7817

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3.3 Site Preparation - 2010**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	7.5000e-004	6.7000e-004	6.2600e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.7479	0.7479	5.0000e-005	0.0000	0.7490	
Total	7.5000e-004	6.7000e-004	6.2600e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.7479	0.7479	5.0000e-005	0.0000	0.7490	

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0269	0.2949	0.1188	1.9000e-004		0.0167	0.0167		0.0153	0.0153	0.0000	18.6460	18.6460	5.4300e-003	0.0000	18.7817	
Total	0.0269	0.2949	0.1188	1.9000e-004	0.0903	0.0167	0.1070	0.0497	0.0153	0.0650	0.0000	18.6460	18.6460	5.4300e-003	0.0000	18.7817	

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3.3 Site Preparation - 2010**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	7.5000e-004	6.7000e-004	6.2600e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.7479	0.7479	5.0000e-005	0.0000	0.7490	
Total	7.5000e-004	6.7000e-004	6.2600e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.7479	0.7479	5.0000e-005	0.0000	0.7490	

3.4 Grading - 2010**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					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1003	1.2659	0.6637	9.3000e-004		0.0584	0.0584		0.0537	0.0537	0.0000	91.0056	91.0056	0.0265	0.0000	91.6678
Total	0.1003	1.2659	0.6637	9.3000e-004	0.1301	0.0584	0.1885	0.0540	0.0537	0.1077	0.0000	91.0056	91.0056	0.0265	0.0000	91.6678

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3.4 Grading - 2010**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	2.5000e-003	2.2300e-003	0.0209	3.0000e-005	2.3600e-003	3.0000e-005	2.3900e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.4930	2.4930	1.5000e-004	0.0000	2.4968	
Total	2.5000e-003	2.2300e-003	0.0209	3.0000e-005	2.3600e-003	3.0000e-005	2.3900e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.4930	2.4930	1.5000e-004	0.0000	2.4968	

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					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.1003	1.2659	0.6637	9.3000e-004		0.0584	0.0584		0.0537	0.0537	0.0000	91.0055	91.0055	0.0265	0.0000	91.6677	
Total	0.1003	1.2659	0.6637	9.3000e-004	0.1301	0.0584	0.1885	0.0540	0.0537	0.1077	0.0000	91.0055	91.0055	0.0265	0.0000	91.6677	

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3.4 Grading - 2010**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	2.5000e-003	2.2300e-003	0.0209	3.0000e-005	2.3600e-003	3.0000e-005	2.3900e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.4930	2.4930	1.5000e-004	0.0000	2.4968	
Total	2.5000e-003	2.2300e-003	0.0209	3.0000e-005	2.3600e-003	3.0000e-005	2.3900e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.4930	2.4930	1.5000e-004	0.0000	2.4968	

3.5 Building Construction - 2010**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	0.4251	3.2165	1.7657	2.4300e-003		0.2354	0.2354		0.2222	0.2222	0.0000	224.8533	224.8533	0.0609	0.0000	226.3756
Total	0.4251	3.2165	1.7657	2.4300e-003		0.2354	0.2354		0.2222	0.2222	0.0000	224.8533	224.8533	0.0609	0.0000	226.3756

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3.5 Building Construction - 2010**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	0.1397	1.5488	0.8349	1.8900e-003	0.0428	0.0468	0.0896	0.0124	0.0448	0.0572	0.0000	180.5258	180.5258	0.0237	0.0000	181.1193	
Worker	0.1221	0.1091	1.0205	1.3600e-003	0.1155	1.3200e-003	0.1168	0.0307	1.2200e-003	0.0320	0.0000	121.9058	121.9058	7.4500e-003	0.0000	122.0922	
Total	0.2618	1.6579	1.8554	3.2500e-003	0.1583	0.0481	0.2064	0.0431	0.0460	0.0891	0.0000	302.4316	302.4316	0.0312	0.0000	303.2115	

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	0.4251	3.2165	1.7657	2.4300e-003		0.2354	0.2354		0.2222	0.2222	0.0000	224.8530	224.8530	0.0609	0.0000	226.3753	
Total	0.4251	3.2165	1.7657	2.4300e-003		0.2354	0.2354		0.2222	0.2222	0.0000	224.8530	224.8530	0.0609	0.0000	226.3753	

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3.5 Building Construction - 2010**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	0.1397	1.5488	0.8349	1.8900e-003	0.0428	0.0468	0.0896	0.0124	0.0448	0.0572	0.0000	180.5258	180.5258	0.0237	0.0000	181.1193	
Worker	0.1221	0.1091	1.0205	1.3600e-003	0.1155	1.3200e-003	0.1168	0.0307	1.2200e-003	0.0320	0.0000	121.9058	121.9058	7.4500e-003	0.0000	122.0922	
Total	0.2618	1.6579	1.8554	3.2500e-003	0.1583	0.0481	0.2064	0.0431	0.0460	0.0891	0.0000	302.4316	302.4316	0.0312	0.0000	303.2115	

3.5 Building Construction - 2011**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	0.2716	2.0852	1.1686	1.6200e-003		0.1527	0.1527		0.1441	0.1441	0.0000	149.5537	149.5537	0.0399	0.0000	150.5516	
Total	0.2716	2.0852	1.1686	1.6200e-003		0.1527	0.1527		0.1441	0.1441	0.0000	149.5537	149.5537	0.0399	0.0000	150.5516	

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3.5 Building Construction - 2011**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	0.0900	1.0653	0.5473	1.2500e-003	0.0285	0.0299	0.0584	8.2500e-003	0.0286	0.0369	0.0000	120.1739	120.1739	0.0157	0.0000	120.5658	
Worker	0.0771	0.0663	0.6283	9.0000e-004	0.0770	8.0000e-004	0.0778	0.0205	7.4000e-004	0.0212	0.0000	81.2276	81.2276	4.5300e-003	0.0000	81.3410	
Total	0.1671	1.1317	1.1755	2.1500e-003	0.1055	0.0307	0.1362	0.0287	0.0293	0.0581	0.0000	201.4016	201.4016	0.0202	0.0000	201.9068	

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	0.2716	2.0852	1.1686	1.6200e-003		0.1527	0.1527		0.1441	0.1441	0.0000	149.5536	149.5536	0.0399	0.0000	150.5514	
Total	0.2716	2.0852	1.1686	1.6200e-003		0.1527	0.1527		0.1441	0.1441	0.0000	149.5536	149.5536	0.0399	0.0000	150.5514	

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3.5 Building Construction - 2011**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	0.0900	1.0653	0.5473	1.2500e-003	0.0285	0.0299	0.0584	8.2500e-003	0.0286	0.0369	0.0000	120.1739	120.1739	0.0157	0.0000	120.5658	
Worker	0.0771	0.0663	0.6283	9.0000e-004	0.0770	8.0000e-004	0.0778	0.0205	7.4000e-004	0.0212	0.0000	81.2276	81.2276	4.5300e-003	0.0000	81.3410	
Total	0.1671	1.1317	1.1755	2.1500e-003	0.1055	0.0307	0.1362	0.0287	0.0293	0.0581	0.0000	201.4016	201.4016	0.0202	0.0000	201.9068	

3.6 Paving - 2011**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	0.0272	0.3009	0.1541	2.3000e-004		0.0169	0.0169		0.0155	0.0155	0.0000	22.2133	22.2133	6.4800e-003	0.0000	22.3753
Paving	6.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0338	0.3009	0.1541	2.3000e-004		0.0169	0.0169		0.0155	0.0155	0.0000	22.2133	22.2133	6.4800e-003	0.0000	22.3753

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3.6 Paving - 2011**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	1.1800e-003	1.0200e-003	9.6400e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.2458	1.2458	7.0000e-005	0.0000	1.2476	
Total	1.1800e-003	1.0200e-003	9.6400e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.2458	1.2458	7.0000e-005	0.0000	1.2476	

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	0.0272	0.3009	0.1541	2.3000e-004		0.0169	0.0169		0.0155	0.0155	0.0000	22.2132	22.2132	6.4800e-003	0.0000	22.3753	
Paving	6.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total	0.0338	0.3009	0.1541	2.3000e-004		0.0169	0.0169		0.0155	0.0155	0.0000	22.2132	22.2132	6.4800e-003	0.0000	22.3753	

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3.6 Paving - 2011**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	1.1800e-003	1.0200e-003	9.6400e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.2458	1.2458	7.0000e-005	0.0000	1.2476	
Total	1.1800e-003	1.0200e-003	9.6400e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.2458	1.2458	7.0000e-005	0.0000	1.2476	

3.7 Architectural Coating - 2011**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	2.6508						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6500e-003	0.0337	0.0198	3.0000e-005		3.1000e-003	3.1000e-003		3.1000e-003	3.1000e-003	0.0000	2.5533	2.5533	4.6000e-004	0.0000	2.5647
Total	2.6565	0.0337	0.0198	3.0000e-005		3.1000e-003	3.1000e-003		3.1000e-003	3.1000e-003	0.0000	2.5533	2.5533	4.6000e-004	0.0000	2.5647

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3.7 Architectural Coating - 2011**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	2.6000e-003	2.2400e-003	0.0212	3.0000e-005	2.6000e-003	3.0000e-005	2.6200e-003	6.9000e-004	2.0000e-005	7.2000e-004	0.0000	2.7408	2.7408	1.5000e-004	0.0000	2.7446	
Total	2.6000e-003	2.2400e-003	0.0212	3.0000e-005	2.6000e-003	3.0000e-005	2.6200e-003	6.9000e-004	2.0000e-005	7.2000e-004	0.0000	2.7408	2.7408	1.5000e-004	0.0000	2.7446	

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	2.6508						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	5.6500e-003	0.0337	0.0198	3.0000e-005		3.1000e-003	3.1000e-003		3.1000e-003	3.1000e-003	0.0000	2.5533	2.5533	4.6000e-004	0.0000	2.5647	
Total	2.6565	0.0337	0.0198	3.0000e-005		3.1000e-003	3.1000e-003		3.1000e-003	3.1000e-003	0.0000	2.5533	2.5533	4.6000e-004	0.0000	2.5647	

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3.7 Architectural Coating - 2011**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	2.6000e-003	2.2400e-003	0.0212	3.0000e-005	2.6000e-003	3.0000e-005	2.6200e-003	6.9000e-004	2.0000e-005	7.2000e-004	0.0000	2.7408	2.7408	1.5000e-004	0.0000	2.7446	
Total	2.6000e-003	2.2400e-003	0.0212	3.0000e-005	2.6000e-003	3.0000e-005	2.6200e-003	6.9000e-004	2.0000e-005	7.2000e-004	0.0000	2.7408	2.7408	1.5000e-004	0.0000	2.7446	

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Peninsula Heights Emissions Assessment- Baseline - San Mateo County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.9519	2.9973	11.2421	0.0187	1.4251	0.0553	1.4804	0.3834	0.0525	0.4360	0.0000	1,697.298	0	1,697.298	0.1027	0.0000	1,699.864
Unmitigated	0.9519	2.9973	11.2421	0.0187	1.4251	0.0553	1.4804	0.3834	0.0525	0.4360	0.0000	1,697.298	0	1,697.298	0.1027	0.0000	1,699.864

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT		Annual VMT	
General Office Building	1,605.36	1,605.36	1605.36	3,836,408		3,836,408	
Parking Lot	0.00	0.00	0.00				
Total	1,605.36	1,605.36	1,605.36	3,836,408		3,836,408	

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.581553	0.048459	0.189724	0.115523	0.022721	0.004373	0.016996	0.006196	0.003007	0.004356	0.006216	0.000293	0.000583
Parking Lot	0.581553	0.048459	0.189724	0.115523	0.022721	0.004373	0.016996	0.006196	0.003007	0.004356	0.006216	0.000293	0.000583

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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	379.1407	379.1407	0.0379	7.8400e-003	382.4261	
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	379.1407	379.1407	0.0379	7.8400e-003	382.4261	
NaturalGas Mitigated	0.0234	0.2131	0.1790	1.2800e-003			0.0162	0.0162		0.0162	0.0162	0.0000	231.9316	231.9316	4.4500e-003	4.2500e-003	233.3099
NaturalGas Unmitigated	0.0234	0.2131	0.1790	1.2800e-003			0.0162	0.0162		0.0162	0.0162	0.0000	231.9316	231.9316	4.4500e-003	4.2500e-003	233.3099

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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					
General Office Building	4.34623e+006	0.0234	0.2131	0.1790	1.2800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	231.9316	231.9316	4.4500e-003	4.2500e-003	233.3099
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		0.0234	0.2131	0.1790	1.2800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	231.9316	231.9316	4.4500e-003	4.2500e-003	233.3099

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					
General Office Building	4.34623e+006	0.0234	0.2131	0.1790	1.2800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	231.9316	231.9316	4.4500e-003	4.2500e-003	233.3099
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		0.0234	0.2131	0.1790	1.2800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	231.9316	231.9316	4.4500e-003	4.2500e-003	233.3099

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	2.80605e+006	369.1132	0.0369	7.6400e-003	372.3118
Parking Lot	76230	10.0274	1.0000e-003	2.1000e-004	10.1143
Total		379.1407	0.0379	7.8500e-003	382.4261

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	2.80605e+006	369.1132	0.0369	7.6400e-003	372.3118
Parking Lot	76230	10.0274	1.0000e-003	2.1000e-004	10.1143
Total		379.1407	0.0379	7.8500e-003	382.4261

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.8970	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1100e-003	4.1100e-003	1.0000e-005	0.0000	4.4400e-003	
Unmitigated	0.8970	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1100e-003	4.1100e-003	1.0000e-005	0.0000	4.4400e-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	4.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Consumer Products	0.8922					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Landscaping	2.4000e-004	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1100e-003	4.1100e-003	1.0000e-005	0.0000	4.4400e-003	
Total	0.8970	2.0000e-005	2.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1100e-003	4.1100e-003	1.0000e-005	0.0000	4.4400e-003	

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	tons/yr										MT/yr						
Architectural Coating	4.5400e-003						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Consumer Products	0.8922						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Landscaping	2.4000e-004	2.0000e-005	2.2700e-003	0.0000			1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1100e-003	4.1100e-003	1.0000e-005	0.0000	4.4400e-003
Total	0.8970	2.0000e-005	2.2700e-003	0.0000			1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1100e-003	4.1100e-003	1.0000e-005	0.0000	4.4400e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

Peninsula Heights Emissions Assessment- Baseline - San Mateo County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	52.3979	1.3061	0.0316	94.4584
Unmitigated	52.3979	1.3061	0.0316	94.4584

7.2 Water by Land Use

Unmitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	39.9617 / 24.4926	52.3979	1.3061	0.0316	94.4584
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000

		Total CO2	CH4	N2O	CO2e
Total		52.3979	1.3061	0.0316	94.4584

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7.2 Water by Land Use**Mitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	39.9617 / 24.4926	52.3979	1.3061	0.0316	94.4584
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		52.3979	1.3061	0.0316	94.4584

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	42.4454	2.5085	0.0000	105.1567
Unmitigated	42.4454	2.5085	0.0000	105.1567

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	209.1	42.4454	2.5085	0.0000	105.1567
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		42.4454	2.5085	0.0000	105.1567

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	209.1	42.4454	2.5085	0.0000	105.1567
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		42.4454	2.5085	0.0000	105.1567

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
