APPENDIX M

GHG Report

Greenhouse Gas Emissions Technical Report For the Palomar Heights Project Escondido, California

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
City	City of Escondido
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
E-CAP	Climate Action Element
EIR	environmental impact report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
General Plan	City of Escondido General Plan
GHG	greenhouse gas
GWP	global warming potential
HCFC	hydrochlorofluorocarbon
I-	Interstate
HFC	hydrofluorocarbon
IPCC	Intergovernmental Panel on Climate Change
MT	metric ton
MMT	million metric ton
N_2O	nitrous oxide
NHTSA	National Highway Traffic Safety Administration
O_3	ozone
PFC	perfluorocarbon
PV	photovoltaic
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCS	Sustainable Communities Strategy
SDAPCD	San Diego Air Pollution Control District
SF_6	sulfur hexafluoride
SLCP	short-lived climate pollutants
TDM	Transportation Demand Management
ZEV	Zero Emissions Vehicle
ZNE	zero net energy

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Executive Summary

The purpose of this technical report is to assess the potential greenhouse gas (GHG) impacts associated with implementation of the proposed Palomar Heights Project (proposed Project). This assessment utilizes the significance thresholds in Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.).

Project Overview

The proposed Project consists of redevelopment of existing approximately 13.8-acre Palomar Health Downtown Campus (Hospital Campus) into a mixed use residential and commercial development. The proposed development would consist of 510 multi-family residential dwelling units and approximately 10,000 square feet of commercial space.

Impact Analysis Summary

This GHG emissions analysis evaluates the potential for the proposed Project to generate GHG emissions during construction and operation that may have a significant impact on the environment, and the potential for the proposed Project to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Principal GHGs regulated under state and federal law includes carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). GHG emissions are measured in metric tons of CO_2 equivalent (MT CO_2e), which account for weighted global warming potential factors for CH_4 and N_2O. Estimated annual proposed Project-generated emissions at full buildout in 2025 from area, energy, mobile, solid waste, and water/wastewater emissions sources, sequestered carbon, as well as amortized proposed Project construction emissions, were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (CAPCOA 2017).[1]

Potential to Generate Significant GHG Emissions

Construction of the proposed Project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. Total proposed Project-generated GHG emissions during construction were estimated to be 5,992 MT CO_2e, or 200 MT CO_2e per year when amortized over 30 years.

The proposed Project would generate operational GHG emissions from area sources (landscape maintenance equipment), energy sources (natural gas and electricity consumption), mobile sources (vehicle trips), water supply and wastewater treatment, and solid waste. Estimated annual proposed Project-generated operational GHG emissions at buildout in 2026 would be approximately 5,332 MT CO_2e per year. Estimated annual project-generated operational emissions in 2026, plus amortized construction emissions, would be approximately 5,532 MT CO_2e per year. The existing hospital GHG emissions were estimated to account for existing baseline emissions and are approximately 8,297 MT CO_2e per year. Therefore, the net annual operational GHG emissions associate with the project would be -2,765 MT CO_2e per year compared to existing emissions.

[1] CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform to calculate construction and operational emissions from land use development projects.

Consistency with Applicable GHG Reduction Plans

The proposed project was shown to be consistent with SANDAG's San Diego Forward: The Regional Plan, Senate Bill 32, and Executive Order S-3-05. The proposed project would not conflict with any plans adopted with the purpose of reducing GHG emissions; therefore, the proposed project's impacts on GHG emissions would be less than significant.

1 Introduction

1.1 Report Purpose and Scope

The purpose of this report is to evaluate the potential greenhouse gas (GHG) emissions impacts associated with construction and operation of the proposed Palomar Heights Project (proposed Project) located in the City of Escondido (City), California, within the County of San Diego (County). This assessment uses the significance thresholds in Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.)

This introductory section provides a description of the proposed Project. Section 2, Environmental Setting, describes the local environment. Section 3, Regulatory Setting, identifies relevant federal, state, and local regulations and policies regarding GHG emissions. Section 4, Significance Criteria and Analysis Methodologies, includes the thresholds of significance applied herein, which are based on Appendix G of the CEQA Guidelines, and presents the methodology for estimating emissions and evaluating impacts. Section 5, Project Impact Analysis, evaluates the proposed Project's potential impacts per the thresholds identified in Section 4. Section 6, References, provides a list of the references cited. Section 7, List of Preparers, provides a list of those who prepared this technical report.

1.2 Regional and Local Setting

The 13.8-acre Project site is located on the eastern edge of the downtown area of the City of Escondido (City), California. Figure 1, Project Location, shows the project location within the County of San Diego and within the City of Escondido. Regionally, the City is situated in northern San Diego County, about 30 miles north of downtown San Diego via Interstate (I-) 15. The Project site is approximately 1.6 miles east of I-15, and about 0.6 miles west of State Route (SR-) 78. The City of San Marcos boundary is approximately 2.2 miles to the northwest.

The proposed Project is located within the San Diego Air Basin and is within the jurisdictional boundaries of the San Diego Air Pollution Control District (SDAPCD). The San Diego Air Basin and the SDAPCD are discussed further in Chapter 2, Environmental Setting, and Chapter 3, Regulatory Setting, respectively.

1.3 Project Description

The Project proposes to demolish all existing structures onsite, and construct a mixed-use residential and commercial development (Figure 2). The Project would include 510 dwelling units and 10,000 square feet of commercial space. In addition, the Project would include supporting open space and recreational amenities, landscaping, parking, and infrastructure improvements. The infrastructure improvements include utility connections to lines within the adjacent roadways as well as roadway frontage improvements. Below is a description of each of these project components.

Residential

The residential uses would be comprised of four multi-family residential unit types; senior apartments, apartments, villas, and rowhomes. The project would have a residential density of 37 units per acre. Below is a description of each housing type proposed.

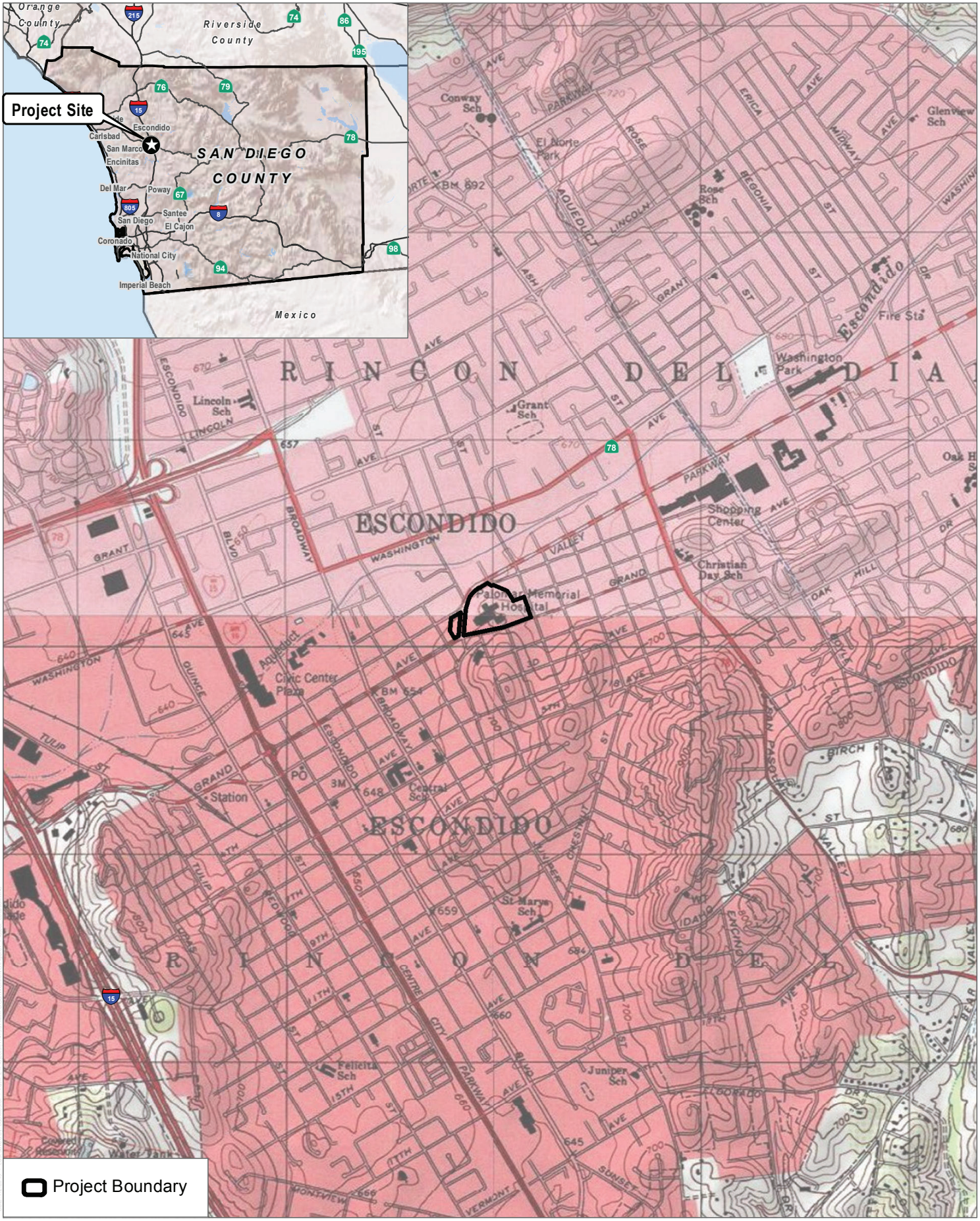
- **Senior apartments** would be situated on the western portion of the Project site, west of Valley Boulevard. The senior units would be within one five-level building that would include parking on the ground floor and residential units on the second to fourth floors. One residential unit would be located on the ground floor. A total of 90 senior units would be provided, and would include a mix of one- and two-bedroom units. The senior apartment building would also include commercial uses, as described below.
- **Apartments** are proposed east of Valley Boulevard within the Project site. A total of 258 apartments would be provided within three buildings. The proposed buildings would be five levels, with four floors and a mezzanine. Apartments would include one-, two-, and three-bedroom units. The buildings associated with the apartments would also include commercial uses, as described below.
- **Villas** would be located east of the apartments within the central area of the Project site. A total of 90 villas would be provided within nine buildings, consisting of two- and three-bedroom units. Villas would include garages on the first floor.
- **Rowhomes** would be located in the southeastern area of the Project site, immediately north of Grande Avenue and west of Fig Street. Rowhomes would provide 72 dwelling units within 11, three-story buildings. Rowhomes would be two- and three-bedroom units.

Commercial

The proposed 10,000 square feet of commercial space would be focused at the intersection of Grand Avenue/Valley Boulevard/Second Avenue. Commercial space is proposed within the southern area of the senior apartment building, and on the southern side of the apartment building proposed adjacent to this intersection. The commercial space within the senior apartment building is anticipated to include a café. The apartment building would include collaborative work space, bar/restaurant, café, and leasing space.

Construction

Construction of the proposed Project is expected to commence in mid-2020 and occur over a 6-year period, with buildout expected mid-2026. Demolition of the existing on-site hospital would last for 6 months. Site preparation and grading would occur thereafter, and would require approximately 10 months. Site paving would last for approximately 3 month following grading, which would include the paving of roadways and other asphalt surfaces. Development of site infrastructure and building construction, including residential uses and the associated commercial uses, would occur over 4 years, beginning in mid-2022. For purposes of modeling, it was assumed that architectural coatings would be applied late in the building construction phase in early 2026, and would last approximately 6 months



SOURCE: USGS 7.5-Minute Series Valley Center and Escondido Quadrangles

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Palomar Heights Project

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SOURCE: Summa, 2019

FIGURE 2

Project Site Plan

Palomar Heights

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2 Environmental Setting

2.1 Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the Sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-20th century and is the most significant driver of observed climate change (IPCC 2013, EPA 2017). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system, which is discussed further in Section 2.5, Potential Effects of Climate Change.

2.2 GHGs and other Climate-Forcing Substances

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), water vapor, hydrofluorocarbons (HFCs), hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).[2] Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the

[2] California Health and Safety Code 38505 identifies seven GHGs that the California Air Resources Board (CARB) is responsible for monitoring and regulating to reduce emissions: CO_2, CH_4, N_2O, SF_6, HFCs, PFCs, and NF_3.

greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as HFCs, HCFCs, PFCs, and SF_6, which are associated with certain industrial products and processes. A summary of the most common GHGs and their sources is included in the following text.[3] Also included is a discussion of other climate forcing substances.

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are from the combustion of fuels such as coal, oil, natural gas, and wood, and changes in land use.

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N_2O as a propellant (such as in rockets, race cars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric O_3-depleting substances (e.g., CFCs, HCFCs, and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to O_3-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the O_3-depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.
- **Sulfur Hexafluoride:** SF_6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF_3 is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere), and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric O_3.

[3] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (1995), IPCC Fourth Assessment Report (2007), CARB's Glossary of Terms Used in GHG Inventories (2015), and the U.S. Environmental Protection Agency's (EPA's) Glossary of Climate Change Terms (2016d).

Hydrochlorofluorocarbons. HCFCs are a large group of compounds, whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter ($PM_{2.5}$), which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived species that varies spatially, which makes it difficult to quantify the global warming potential (GWP). Diesel particulate matter emissions are a major source of black carbon and are toxic air contaminants that have been regulated and controlled in California for several decades to protect public health. In relation to declining diesel particulate matter from the California Air Resources Board's (CARB's) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O_3, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O_3, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O_2), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O_3, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

2.3 Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2016). The Intergovernmental Panel on Climate Change (IPCC) developed the GWP concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons of carbon dioxide equivalent (MT CO_2e).

The current version of the California Emissions Estimator Model (CalEEMod) (Version 2016.3.2) assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O

is 298, based on the IPCC Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the proposed Project.

2.4 Sources of GHG Emissions

Global Inventory

Anthropogenic GHG emissions worldwide in 2014 (the most recent year for which data is available) totaled approximately 45,741 million metric tons (MMT) CO_2e, excluding land use change and forestry (WRI 2015). Six countries—China, the United States, the Russian Federation, India, Japan, and Brazil—and the European community accounted for approximately 65% of the total global emissions, approximately 29,920 MMT CO_2e (WRI 2015). Table 1 presents the top GHG-emissions-producing countries.

Table 1. Six Top GHG Producer Countries and the European Union

Emitting Countries	GHG Emissions (MMT CO_2e)
China	11,911.71
United States	6,371.10
European Union	4,053.66
India	3,079.81
Russian Federation	2,137.83
Japan	1,314.59
Brazil	1,051.00
Total	**29,919.70**

Source: WRI 2015.
Notes: MMT CO_2e = million metric tons of carbon dioxide equivalent.

National and State Inventories

Per the U.S. Environmental Protection Agency's (EPA's) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2016 (EPA 2018), total U.S. GHG emissions were approximately 6,511.3 MMT CO_2e in 2016. The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 81.6% of total GHG emissions (5,310.9 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 93.5% of CO_2 emissions in 2016 (4,996.0 MMT CO_2e). Relative to 1990, gross United States GHG emissions in 2016 are higher by 2.4%, down from a high of 15.7% above 1990 levels in 2007. GHG emissions decreased from 2015 to 2016 by 1.9% (126.8 MMT CO_2e) and overall, net emissions in 2016 were 11.1% below 2005 levels (EPA 2018).

According to California's 2000–2015 GHG emissions inventory (2017 edition), California emitted 440.36 MMT CO_2e in 2015, including emissions resulting from out-of-state electrical generation (CARB 2017a). The sources of GHG emissions in California include transportation, industrial uses, electric power production from both in-state and out-of-state sources, commercial and residential uses, agriculture, high GWP substances, and recycling and waste. The California GHG emission source categories (as defined in CARB's 2008 *Climate Change Scoping Plan: A Framework for Change* (Scoping Plan; CARB 2008)) and their relative contributions in 2015 are presented in Table 2.

Table 2. GHG Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	164.63	37%
Industrial uses[b]	91.71	21%
Electricity generation[c]	83.67	19%
Residential and commercial uses	37.92	9%
Agriculture	34.65	8%
High GWP substances	19.05	4%
Recycling and waste	8.73	2%
Total	**440.36**	**100%**

Source: CARB 2017a.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent per year.
Emissions reflect 2015 California GHG inventory.

[a] Percentage of total has been rounded and total may not sum due to rounding.

[b] The Aliso Canyon natural gas leak event released 1.96 MMT CO_2e of unanticipated emissions in 2015 and 0.52 MMT CO_2e in 2016. These leak emissions will be fully mitigated according to legal settlement and are tracked separately from routine inventory emissions.

[c] Includes emissions associated with imported electricity, which account for 33.74 MMT CO_2e.

2.5 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 *Intergovernmental Panel on Climate Change Synthesis Report* indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, and rising sea levels (IPCC 2014).

In California, climate change impacts have the potential to affect sea level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply (CCCC 2006). The primary effect of global climate change has been a 0.2° Celsius (°C) rise in average global tropospheric temperature per decade, determined from meteorological measurements worldwide between 1990 and 2005. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. A warming of about 0.2°C (0.36° Fahrenheit (°F)) per decade is projected, and there are identifiable signs that global warming could be taking place.

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The average temperatures in California have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

An increase in annual average temperature is a reasonably foreseeable effect of climate change. Observed changes over the last several decades across the western United States reveal clear signals of climate change. Statewide average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a

threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1 to 8.6°F, depending on emissions levels. Springtime warming—a critical influence on snowmelt—will be particularly pronounced. Summer temperatures will rise more than winter temperatures, and the increases will be greater in inland California, compared to the coast. Heat waves will be more frequent, hotter, and longer. There will be fewer extremely cold nights (CCCC 2012). A decline of Sierra snowpack, which accounts for approximately half of the surface water storage in California and much of the state's water supply, by 30% to as much as 90% is predicted over the next 100 years (CAT 2006).

Model projections for precipitation over California continue to show the Mediterranean pattern of wet winters and dry summers with seasonal, year-to-year, and decade-to-decade variability. For the first time, however, several of the improved climate models shift toward drier conditions by the mid-to-late 21st century in central and, most notably, Southern California. By late-century, all projections show drying, and half of them suggest 30-year average precipitation will decline by more than 10% below the historical average (CCCC 2012).

A summary of current and future climate change impacts to resource areas in California, as discussed in the *Safeguarding California: Reducing Climate Risk* (CNRA 2014), is provided below.

Agriculture. The impacts of climate change on the agricultural sector are far more severe than the typical variability in weather and precipitation patterns that occur year to year. The agriculture sector and farmers face some specific challenges that include more drastic and unpredictable precipitation and weather patterns; extreme weather events that range from severe flooding to extreme drought, to destructive storm events; significant shifts in water availably and water quality; changes in pollinator lifecycles; temperature fluctuations, including extreme heat stress and decreased chill hours; increased risks from invasive species and weeds, agricultural pests and plant diseases; and disruptions to the transportation and energy infrastructure supporting agricultural production. These challenges and associated short-term and long-term impacts can have both positive and negative effects on agricultural production. Nonetheless, it is predicted that current crop and livestock production will suffer long-term negative effects resulting in a substantial decrease in the agricultural sector if not managed or mitigated.

Biodiversity and Habitat. The state's extensive biodiversity stems from its varied climate and assorted landscapes, which have resulted in numerous habitats where species have evolved and adapted over time. Specific climate change challenges to biodiversity and habitat include species migration in response to climatic changes, range shift and novel combinations of species; pathogens, parasites and disease; invasive species; extinction risks; changes in the timing of seasonal life-cycle events; food web disruptions; threshold effects (i.e., a change in the ecosystem that results in a "tipping point" beyond which irreversible damage or loss has occurs). Habitat restoration, conservation, and resource management across California and through collaborative efforts amongst public, private, and nonprofit agencies has assisted in the effort to fight climate change impacts on biodiversity and habitat. One of the key measures in these efforts is ensuring species' ability to relocate as temperature and water availability fluctuate as a result of climate change, based on geographic region.

Energy. The energy sector provides California residents with a supply of reliable and affordable energy through a complex integrated system. Specific climate change challenges for the energy sector include temperature, fluctuating precipitation patterns, increasing extreme weather events, and sea level rise. Increasing temperatures and reduced snowpack negatively impact the availability of a steady flow of snowmelt to hydroelectric reservoirs. Higher temperatures also reduce the capacity of thermal power plants since power plant cooling is less efficient at higher ambient temperatures. Increased temperatures will also increase electricity demand associated with air conditioning. Natural gas infrastructure in coastal California is threatened by sea level rise and extreme storm events.

Forestry. Forests occupy approximately 33% of California's 100 million acres and provide key benefits such as wildlife habitat, absorption of carbon dioxide, renewable energy, and building materials. The most significant climate change related risk to forests is accelerated risk of wildfire and more frequent and severe droughts. Droughts have resulted in more large scale mortalities and combined with increasing temperatures have led to an overall increase in wildfire risks. Increased wildfire intensity subsequently increases public safety risks, property damage, fire suppression and emergency response costs, watershed and water quality impacts, and vegetation conversions. These factors contribute to decreased forest growth, geographic shifts in tree distribution, loss of fish and wildlife habitat, and decreased carbon absorption. Climate change may result in increased establishment of non-native species, particularly in rangelands where invasive species are already a problem. Invasive species may be able to exploit temperature or precipitation changes, or quickly occupy areas denuded by fire, insect mortality, or other climate change effects on vegetation.

Ocean and Coastal Ecosystems and Resources. Sea level rise, changing ocean conditions, and other climate change stressors are likely to exacerbate long-standing challenges related to ocean and coastal ecosystems in addition to threatening people and infrastructure located along the California coastline and in coastal communities. Sea level rise in addition to more frequent and severe coastal storms and erosion are threatening vital infrastructure such as roads, bridges, power plants, ports and airports, gasoline pipes, and emergency facilities, as well as negatively impacting the coastal recreational assets such as beaches and tidal wetlands. Water quality and ocean acidification threaten the abundance of seafood and other plant and wildlife habitats throughout California and globally.

Public Health. Climate change can impact public health through various environmental changes and is the largest threat to human health in the twenty-first century. Changes in precipitation patterns affect public health primarily through potential for altered water supplies, and extreme events such as heat, floods, droughts, and wildfires. Increased frequency, intensity, and duration of extreme heat and heat waves is likely to increase the risk of mortality due to heat-related illness, as well as exacerbate existing chronic health conditions. Other extreme weather events are likely to negatively impact air quality and increase or intensify respiratory illness such as asthma and allergies. Additional health impacts that may be impacted by climate change include cardiovascular disease, vector-borne diseases, mental health impacts, and malnutrition injuries. Increased frequency of these ailments is likely to subsequently increase the direct risk of injury and/or mortality.

Transportation. Residents of California rely on airports, seaports, public transportation, and an extensive roadway network to gain access to destinations, goods, and services. While the transportation industry is a source of GHG emissions, it is also vulnerable to climate change risks. Particularly, sea level rise and erosion threaten many coastal California roadways, airports, seaports, transit systems, bridge supports, and energy and fueling infrastructure. Increasing temperatures and extended periods of extreme heat threaten the integrity of the roadways and rail lines. High temperatures cause the road surfaces to expand which leads to increased pressure and pavement buckling. High temperatures can also cause rail breakages, which could lead to train derailment. Other forms of extreme weather events, such as extreme storm events, can negatively impact infrastructure which can impair movement of peoples and goods, or potentially block evacuation routes and emergency access roads. Increased wildfires, flooding, erosion risks, landslides, mudslides, and rockslides can all profoundly impact the transportation system and pose a serious risk to public safety.

Water. Water resources in California support residences, plants, wildlife, farmland, landscapes, and ecosystems and bring trillions of dollars in economic activity. Climate change could seriously impact the timing, form, amount of precipitation, runoff patterns, and frequency and severity of precipitation events. Higher temperatures reduce the amount of snowpack and lead to earlier snowmelt, which can impact water supply availability, natural ecosystems, and winter recreation. Water supply availability during the intense dry summer months is heavily

dependent on the snowpack accumulated during the winter time. Increased risk of flooding has a variety of public health concerns including water quality, public safety, property damage, displacement, and post-disaster mental health problems. Prolonged and intensified droughts can also negatively affect groundwater reserves and result in increased overdraft and subsidence. Droughts can also negatively impact agriculture and farmland throughout the state. The higher risk of wildfires can lead to increased erosion, which can negatively impact watersheds and result in poor water quality. Water temperatures are also prone to increase, which can negatively impact wildlife that rely on a specific range of temperatures for suitable habitat.

In March 2016, the CNRA released Safeguarding California: Implementation Action Plans, a document that shows how California is acting to convert the recommendations contained in the 2014 Safeguarding California plan into action (CNRA 2016). Additionally, in May 2017, CNRA released the draft Safeguarding California Plan: 2017 Update, which is a survey of current programmatic responses for climate change and contains recommendations for further actions (CNRA 2017).

The CNRA released *Safeguarding California Plan: 2018 Update* in January 2018, which provides a roadmap for state agencies to protect communities, infrastructure, services, and the natural environment from climate change impacts. The 2018 Safeguarding California Plan includes 69 recommendations across 11 sectors and more than 1,000 ongoing actions and next steps developed by scientific and policy experts across 38 state agencies (CNRA 2018). As with previous state adaptation plans, the 2018 Update addresses the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, and ocean acidification, hypoxia, and warming.

3 Regulatory Setting

3.1 Federal Activities

Massachusetts v. EPA. In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."
- The administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling discussed above, the Bush Administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (75 FR 25324–25728).

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The

final rule was adopted in 2012 for model years 2017–2021 (77 FR 62624–63200), and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6%–23% over the 2010 baselines (76 FR 57106–57513).

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types of sizes of buses and work trucks. The final standards are expected to lower carbon dioxide emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

3.2 State of California

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

EO S-3-05. EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80% below 1990 levels by 2050.

AB 32 and CARB's Climate Change Scoping Plan. In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, CARB is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. CARB also is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 relatedly authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO_2e). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the *Climate Change Scoping Plan: A Framework for Change* (Scoping Plan) in accordance with Health and Safety Code Section 38561. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
2. Achieving a statewide renewable energy mix of 33%.
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions.
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard.
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In the Scoping Plan, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5% from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations (referred to as "Business-As-Usual"). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants; no further regulatory action would impact vehicle fuel efficiency; and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the Scoping Plan's Functional Equivalent Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7% (down from 28.5%) from the Business-As-Usual conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (RPS; CPUC 2015; 12% to 20%), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 28.5%) from the Business-As-Usual conditions.

More recently, in 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (First Update). The stated purpose of the First Update is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050" (CARB 2014). The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's

more expansive emission reduction needs by 2050" (CARB 2014). Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and, (6) natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal.

CARB's research efforts presented in the First Update indicate that it has a "strong sense of the mix of technologies needed to reduce emissions through 2050" (CARB 2014). Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and, the rapid market penetration of efficient and clean energy technologies.

As part of the First Update, CARB recalculated the state's 1990 emissions level using more recent GWPs identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO_2e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 28.5% or 16%) from the Business-As-Usual conditions.

On January 20, 2017, CARB released The *2017 Climate Change Scoping Plan Update* (Second Update) for public review and comment (CARB 2017b). This update presents CARB's strategy for achieving the state's 2030 GHG target as established in SB 32 (discussed below), including continuing the Cap-and-Trade Program through 2030, and includes a new approach to reduce GHGs from refineries by 20%. The Second Update incorporates approaches to cutting short-lived climate pollutants (SLCPs) under the Short-Lived Climate Pollutant Reduction Strategy (a planning document that was adopted by CARB in March 2017), and acknowledges the need for reducing emissions in agriculture and highlights the work underway to ensure that California's natural and working lands increasingly sequester carbon. During development of the Second Update, CARB held a number of public workshops in the Natural and Working Lands, Agriculture, Energy, and Transportation sectors to inform development of the 2030 Scoping Plan Update (CARB 2016). When discussing project-level GHG emissions reduction actions and thresholds, the Second Update states "achieving no net increase in GHG emissions is the correct overall objective, but it may not be appropriate or feasible for every development project. An inability to mitigate a project's GHG emissions to zero does not necessarily imply a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA" (CARB 2017b). The Second Update was approved by CARB's Governing Board on December 14, 2017.

EO B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050 as set forth in S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's Scoping Plan to express the 2030 target in terms of MMT CO_2e. The EO also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

SB 32 and AB 197. SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction targets, make changes to CARB's membership and increase legislative oversight of CARB's climate change-based activities, and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members

of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and, requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

SB 605 and SB 1383. SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of SLCPs in the state; and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for CH_4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its *Short-Lived Climate Pollutant Reduction Strategy* (SLCP Reduction Strategy) in March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, CH_4 and fluorinated gases.

Building Energy

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code, Section 25402(b)(1)). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402(d)) and cost effectiveness (California Public Resources Code, Sections 25402(b)(2) and (b)(3)). These standards are updated to consider and incorporate new energy-efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2016 Title 24 standards are the currently applicable building energy efficiency standards, and became effective on January 1, 2017. In general, single-family homes built to the 2016 standards are anticipated to use about 28% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and nonresidential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2015a).

The 2019 Title 24 standards were approved and adopted by the California Building Standards Commission in December 2018. The 2019 standards will become effective January 1, 2020. The standards would require that all low-rise residential buildings shall have a PV system meeting the minimum qualification requirements such that annual electrical output equal to or greater than the dwelling's annual electrical usage. Notably, net energy metering rules limit residential rooftop solar generation to produce no more electricity than the home is expected to consume on an annual basis. Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards.

The California Public Utilities Commission (CPUC), CEC, and CARB previously established a goal of achieving zero net energy (ZNE) for new construction in California. The key policy timelines include (1) all new residential construction in California will be ZNE by 2020, and (2) all new commercial construction in California will be ZNE by

2030 (CPUC 2013). As most recently defined by the CEC in its 2015 *Integrated Energy Policy Report*, a ZNE code building is "one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building" using the CEC's Time Dependent Valuation metric (CEC 2015b).

The 2019 Title 24 standards take a significant step towards the state's ZNE goal. However, as explained by the CEC, California's energy landscape has changed since the ZNE target was set. Electricity produced for the grid now comes substantially from renewables, and 60 percent renewable electricity generation is required by 2030. Further, new net energy metering rules also limit the amount of residential rooftop solar generation to no more electricity production than the home is annually expected to consume.

The 2019 Title 24 standards therefore focus on building energy efficiency and ensuring solar electricity generated onsite is used onsite. "Looking beyond the 2019 standards, the most important energy characteristic for a building will be that it produces and consumes energy at times that are appropriate and responds to the needs of the grid, which reduces the building's emissions" (CEC 2018). In furtherance of that characteristic, the 2019 standards require that new homes include solar PV to meet the home's expected annual electric needs, and also encourage demand responsive technologies including battery storage, heat pump water heaters, and improving the building's thermal envelope through high performance attics, walls and windows. These smarter homes perform better and affect the grid less, which reduces the building's GHG emissions.

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (CALGreen 2016) is commonly referred to as CALGreen, and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require the following (CALGreen 2016):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings.
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance.
- 65% of construction and demolition waste must be diverted from landfills.
- Mandatory inspections of energy systems to ensure optimal working efficiency.
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations.
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements, stricter water conservation, 65% diversion of construction and demolition waste, 10% recycled content in building materials, 20% permeable paving, 20% cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements, stricter water conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 25% cement reduction, and cool/solar-reflective roofs.

The California Building Standards Commission approved amendments to the voluntary measures of the CALGreen standards in December 2018. The 2019 CALGreen standards will become effective January 1, 2020. As with the 2019 Title 24 standards, the 2019 CALGreen standards focus on building energy efficiency. As previously discussed, current CalGreen Tier 1 and 2 structure relies on percentage targets of 15 percent and 30 percent above standard code. These percentages would be replaced by Energy Design Rating (EDR) scores; somewhere between 14 and 12 for Tier 1 and 0 for Tier 2, where an EDR score of 0 is the threshold for Zero Net Energy code building.

Title 20. Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

SB 1. SB 1 (2006) established a $3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the Public Resources Code, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry in which solar energy systems are a viable mainstream option for both homes and businesses within 10 years of adoption, and to place solar energy systems on 50% of new homes within 13 years of adoption. SB 1, also termed "GoSolarCalifornia," was previously titled "Million Solar Roofs."

AB 1470. This bill established the Solar Water Heating and Efficiency Act of 2007. The bill makes findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand. The bill defines several terms for purposes of the act. The bill requires the commission to evaluate the data available from a specified pilot program, and, if it makes a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting, to reduce electricity consumption 50% for indoor residential lighting and 25% for indoor commercial lighting.

Renewable Energy and Energy Procurement

SB 1078. SB 1078 (2002) established the RPS program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010.

SB 1368. SB 1368 (2006) requires the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the CPUC. This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low as or lower than new combined-cycle natural gas plants by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

SB X1 2. SB X1 2 (2011) expanded the RPS by establishing that 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350. SB 350 (2015) further expanded the RPS by establishing that 50% of the total electricity sold to retail customers in California per year by December 31, 2030, be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

Mobile Sources

AB 1493. In a response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%.

EO S-1-07. Issued on January 18, 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. In September 2018, CARB adopted regulatory amendments to extend the LCFS for an additional 10 years with a target of 20% carbon intensity reduction from 2010 levels by 2030.

SB 375. SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations are then responsible

for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), an SCS does not: (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for San Diego Association of Governments (SANDAG) are a 7% reduction in emissions per capita by 2020 and a 13% reduction by 2035.

SANDAG completed and adopted its *2050 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) in October 2011 (SANDAG 2011). In November 2011, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region.

After SANDAG's 2050 RTP/SCS was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and others. The case was decided in July 2017, and the court found that the EIR's did not have to use EO S-3-05's 2050 goal of an 80% reduction in GHG emissions from 1990 levels as a threshold because the EIR sufficiently informed the public of the potential impacts.

Although the EIR for SANDAG's 2050 RTP/SCS is pending before the California Supreme Court, in 2015, SANDAG adopted the next iteration of its RTP/SCS in accordance with statutorily mandated timelines, and no subsequent litigation challenge was filed. More specifically, in October 2015, SANDAG adopted *San Diego Forward: The Regional Plan*. Like the 2050 RTP/SCS, this planning document meets CARB's 2020 and 2035 reduction targets for the region (SANDAG 2015). In December 2015, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region. In March 2018, CARB approved updates to the SB 375 GHG emission reduction targets including a reduction of 15% reduction in emissions per capita by 2020 and a 19% reduction by 2035 for SANDAG. SANDAG will demonstrate progress towards meeting the updated GHG emission reduction targets in the next update to the RTP/SCS.

Advanced Clean Cars Program. In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2011). To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75% less smog-forming pollution than the average new car sold before 2012. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The Zero Emissions Vehicle (ZEV) program will act as the

focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018 to 2025 model years. The Clean Fuels Outlet regulation will ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced technology vehicles as they come to the market.

EO B-16-12. EO B-16-12 (2012) directs state entities under the governor's direction and control to support and facilitate development and distribution ZEVs. This EO also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80% less than 1990 levels by 2050. In furtherance of this EO, the Governor convened an Interagency Working Group on ZEVs that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

AB 1236. AB 1236 (2015) as enacted in California's Planning and Zoning Law, requires local land use jurisdictions to approve applications for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provides for appeal of that decision to the planning commission, as specified. The bill requires local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that creates an expedited and streamlined permitting process for electric vehicle charging stations, as specified. Prior to this statutory deadline, in August 2016, the County Board of Supervisors adopted Ordinance No. 10437 (N.S.) adding a section to its County Code related to the expedited processing of electric vehicle charging stations permits consistent with AB 1236.

SB 350. In 2015, SB 350—the Clean Energy and Pollution Reduction Act—was enacted into law. As one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see Public Utilities Code Section 740.12).

Solid Waste

AB 939 and AB 341. In 1989, AB 939, known as the Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the state in reaching the 75% goal by 2020.

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended

through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Other State Regulations and Goals

SB 97. SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The California Natural Resources Agency adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4(a)). The Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)). The Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The California Natural Resources Agency also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009a).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4(a)). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

EO S-13-08. EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final *2009 California Climate Adaptation Strategy* report was issued in December 2009 (CNRA 2009a), and an update, *Safeguarding California: Reducing Climate Risk*, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: Agriculture, Biodiversity and Habitat, Emergency Management, Energy, Forestry, Ocean

and Coastal Ecosystems and Resources, Public Health, Transportation, and Water. Issuance of the *Safeguarding California: Implementation Action Plans* followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018).

2015 State of the State Address. In January 2015, Governor Brown in his inaugural address and annual report to the Legislature established supplementary goals which would further reduce GHG emissions over the next 15 years. These goals include an increase in California's renewable energy portfolio from 33% to 50%, a reduction in vehicle petroleum use for cars and trucks by up to 50%, measures to double the efficiency of existing buildings, and decreasing emissions associated with heating fuels.

2016 State of the State Address. In his January 2016 address, Governor Brown established a statewide goal to bring per capita GHG emission down to two tons per person, which reflects the goal of the Global Climate Leadership Memorandum of Understanding (Under 2 MOU) to limit global warming to less than 2°C by 2050. The Under 2 MOU agreement pursues emission reductions of 80% to 95% below 1990 levels by 2050 and/or reach a per-capita annual emissions goal of less than two metric tons by 2050. A total of 187 jurisdictions representing 38 countries and 6 continents, including California, have signed or endorsed the Under 2 MOU (Under 2 Coalition 2017).

3.3 Local Regulations

San Diego Air Pollution Control District

The SDAPCD does not have established GHG rules, regulations, or policies.

City of Escondido General Plan

As discussed in the General Plan, climate change and GHG reduction policies are addressed in multiple chapters of the General Plan. The City's General Plan (City of Escondido 2012b) includes various goals and policies for reduction of GHG emissions in the General Plan are as follows:

Land Use and Community Form

- **Goal 1:** A community composed of distinct residential neighborhoods, business districts, and employment centers, whose urban form reflects the natural environmental setting.
- **Policy 1.8:** Require development projects to locate and design buildings, construct energy and water efficient infrastructure, reduce greenhouse gas emissions, enhance community livability and economic vitality, and implement other practices contributing to sustainable resources.
- **Policy 1.9:** Promote development in downtown, at transit stations, and other key districts to accommodate a mix of land uses and configure uses to promote walkability, bicycling, and transit uses, reducing the need for the automobile.
- **Goal 4:** Residential neighborhoods that are well maintained and enduring, and continue to be great places to live for multiple generations.
- **Policy 4.3:** Integrate pedestrian-friendly features, promote walkability, and work with residents to enhance existing neighborhood character and aesthetics.

- **Goal 7:** Districts containing a mix of uses enabling residents to live close to their jobs, shopping, entertainment, and recreation, reducing the need to use the automobile and promoting walking and healthy lifestyles.
- **Policy 7.1:** Designate areas for the development of mixed-use projects in a pedestrian-friendly environment integrating housing with retail, office, and service uses.

Mobility and Infrastructure

- **Goal 1:** An accessible, safe, convenient, and integrated multi-modal network that connects all users and moves goods and people within the community and region efficiently.
- **Policy 3.2:** Develop and manage pedestrian facilities to maintain an acceptable Level of Service.
- **Policy 3.3:** Maintain a pedestrian environment that is accessible to all.
- **Policy 4.2:** Develop and manage bicycle facilities to maintain an acceptable Level of Service.
- **Policy 4.3:** Promote bicycling as a common mode of transportation and recreation to help reduce traffic congestion.
- **Goal 2:** Adequate and sustainable infrastructure and water supply to serve a community that values and conserves water.
- **Policy 12.12:** Incorporate water conservation techniques into building and site design incorporating such elements as water efficient fixtures; drought-tolerant landscape, permeable hardscapes, and onsite stormwater capture and reuse facilities.
- **Goal 3:** Provision of adequate and sustainable wastewater infrastructure to serve residents, businesses and property.
- **Policy 13.11:** Require new development to implement appropriate and feasible systems that reduce the amount of wastewater requiring treatment.
- **Goal 4:** Provision of adequate and sustainable infrastructure that is environmentally sensitive to serve residents, businesses, and property.
- **Policy 14.4:** Require new development to create a mechanism to finance and fund ongoing maintenance of stormwater facilities.
- **Policy 14.5:** Require new development to prepare drainage studies and improvement plans that demonstrate no net increase in stormwater runoff and compliance with adopted stormwater plans.
- **Goal 6:** An increased use of renewable energy sources, and improved energy conservation and efficiency.
- **Policy 16.4:** Encourage site and building design that reduces exterior heat gain and heat island effects.
- **Policy 16.5:** Require building orientations and landscaping that use natural lighting to reduce energy demands.

Resource Conservation

- **Goal 7:** Improved air quality in the city and the region to maintain the community's health and reduce greenhouse gas emissions that contribute to climate change.
- **Policy 7.3:** New development projects incorporate feasible measures that reduce construction and operational emissions.

Escondido Climate Action Plan (E-CAP). The E-CAP, adopted in December 5, 2013, establishes a target of reducing GHG emissions within the City by 15 percent below existing emissions levels by 2020. Accordingly, the E-CAP is intended to reduce 26,807 MT CO_2E per year from new development by 2020 within the City as compared with the

2020 unmitigated conditions (City of Escondido 2013a). Reductions of GHG emissions within the E-CAP are designed to achieve the state's adopted AB 32 GHG reduction target.

Under the E-CAP, new projects within the City are first screened to determine if E-CAP measures are required. The E-CAP established guidance requiring a 2,500 MT CO_2E screening threshold for all small commercial, residential, and light industrial projects. Projects that do not exceed the 2,500 MT CO_2E screening threshold would be considered to have a "less than significant GHG emissions impact" under the E-CAP.

Projects that are anticipated to generate more than 2,500 MT CO_2E are required to use the screening tables to demonstrate compliance with the E-CAP. The E-CAP's screening tables provide guidance in measuring the reduction of GHG emissions attributed to certain design and construction measures incorporated into development projects (City of Escondido 2013b). The screening tables assign points for each option incorporated into a project as mitigation or a project design feature. Point values correspond with the minimum emissions reduction that is expected from each feature. If a project achieves a minimum of 100 points, it would be considered consistent with the reduction quantities anticipated in the E-CAP. Projects that exceed 100 points or more do not require project-specific emissions to be quantified.

It should be noted that the E-CAP is not a certified GHG reduction plan beyond 2020. The E-CAP acknowledges that 2020 is only a milestone in the City's GHG emissions reduction planning and that additional planning for post-2020 is required. The E-CAP indicates that the post-2020 E-CAP would include a specific target for GHG reductions for 2035 and 2050 and states that, "The targets would be consistent with broader state and federal reduction targets and with the scientific understanding of the needed reductions by 2050" (City of Escondido 2013a). For the E-CAP to be a certified GHG reduction plan beyond 2020, it will have to incorporate reduction measures that align with SB 32 and EO S-3-05.The E-CAP update process is underway but the City has yet to adopt or approve the update that would enable this project to tier from the E-CAP.

4 Significance Criteria and Analysis Methodologies

4.1 Significance Criteria

The significance criteria used to evaluate the proposed Project's GHG emissions impacts are based on the recommendations provided in Appendix G of the CEQA Guidelines. For the purposes of this GHG emissions analysis, the proposed Project would have a significant environmental impact if it would (14 CCR 15000 et seq.):

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The Appendix G thresholds for GHG's do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009c). Additional guidance regarding assessment of GHG's is discussed below.

CEQA Guidelines

With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's greenhouse gas emissions or rely on a "qualitative analysis or other performance based standards" (14 CCR 15064.4[b]). A lead agency may use a "model or methodology" to estimate greenhouse gas emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (14 CCR 15064.4[c]). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

In addition, the CEQA Guidelines specify that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

OPR Guidance

The OPR's Technical Advisory titled *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review* states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

Cumulative Nature of Climate Change

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project in the San Diego Air Basin, such as the project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change.

While the project would result in emissions of GHGs during construction and operation, no guidance exists to indicate what level of GHG emissions would be considered substantial enough to result in a significant adverse impact on global climate. However, it is generally believed that an individual project is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory as scientific uncertainty regarding the significance a project's individual and cumulative effects on global climate change remains.

Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). This approach is consistent with that recommended by the CNRA, which noted in its Public Notice for the proposed CEQA amendments (pursuant to SB97) that the evidence before it indicates that in most cases, the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA 2009a). Similarly, the Final Statement of Reasons for Regulatory Action on the CEQA Amendments confirm that an EIR or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009b). Accordingly, further discussion of the project's GHG emissions and their impact on global climate are addressed in Section 5.

In the absence of any adopted numeric threshold, the significance of a project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. As a land use development project, the most directly applicable adopted regulatory plan to reduce the proposed project's GHG emissions is SANDAG's Regional Plan, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the State's long-term climate goals. This analysis also considers consistency with regulations or requirements adopted by the 2008 Climate Change Scoping Plan and subsequent updates.

4.2 Construction Emissions Methodology

Emissions from the construction phase of the proposed Project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 (CAPCOA 2017).

For the purposes of modeling, it was assumed that construction of the Project would commence in June 2020 and would occur over a period of approximately 6 years, ending in May 2026.

As described in Section 1.3, Project Description, the proposed Project would involve the demolition of the existing hospital, which is approximately 392,000 square feet in size. Following demolition of the existing hospital, site preparation and grading of an approximately 13.8-acre site would commence. Based on information provided by the project applicant, approximately 212,361 cubic yards would be cut and 227,831 would be would be filled back in, requiring in import of approximately 15,470 cubic yards. Balancing activities are anticipated to be performed through the use of off-road construction equipment (e.g., excavators, graders, dozers, and scrapers). Blasting activities are not anticipated for the Project and are not accounted for in this analysis. The analysis contained herein is based on the assumptions outlined in Table 3, Construction Phasing Assumptions (the duration of phases is approximate). The Project schedule was based on information provided by the Project applicant.

Table 3. Construction Phasing Assumptions

Project Construction Phase	Construction Start Month/Year	Construction End Month/Year
Demolition	06/2020	12/2020
Site Preparation	01/2021	05/2021
Grading	05/2021	11/2021
Paving 1	11/2021	02/2022
Building Construction	02/2022	05/2026
Paving 2	01/2025	03/2025
Architectural Coating	01/2026	05/2026

Source: Integral Communities 2019.

The construction equipment mix used for estimating the construction emissions of the proposed Project is based on information provided by the applicant and CalEEMod default values and is shown in Table 4, Construction Scenario Assumptions. Notably, because detailed specific information regarding the construction equipment fleet is unknown at the time of analysis, the analysis is based on the default construction equipment fleet provided by CalEEMod. The construction tabs within CalEEMod contain default information that was obtained from a survey of construction sites conducted by South Coast Air Quality Management District (SCAQMD) (CAPCOA 2017). The construction survey data is grouped by construction phase and lot acreage and can be found in Appendix E1 of the CalEEMod User Guide. The default construction equipment list and phase length data were determined to be the most appropriate for the size and types surveyed. Furthermore, because of data gaps presented in the projects surveyed, the data was extrapolated to create default values for project sizes that were not in the survey (CAPCOA 2017).

Table 4. Construction Scenario Assumptions

Construction Phase	One-way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Demolition	16	0	1,784	Concrete/Industrial Saws	1	8
				Excavators	3	8
				Rubber Tired Dozers	2	8
Site Preparation	18	0	0	Rubber Tired Dozers	3	8
				Tractors/Loaders/Backhoes	4	8
Grading	20	0	1,530	Excavators	2	8
				Graders	1	8
				Rubber Tired Dozers	1	8
				Scrapers	2	8
				Tractors/Loaders/Backhoes	2	8
Paving 1	16	0	0	Pavers	2	8
				Paving Equipment	2	8
				Rollers	2	8
Building Construction	526	116	0	Cranes	1	7
				Forklifts	3	8
				Generator Sets	1	8
				Tractors/Loaders/Backhoes	3	7
				Trenchers	1	8
				Welders	1	8
Paving 2	16	0	0	Pavers	2	8
				Paving Equipment	2	8
				Rollers	2	8
Architectural Coating	106	0	0	Air Compressors	1	6

Notes: See Appendix A for details.

Construction phasing specifications were provided by the Project applicant, while the default values generated by CalEEMod were used for the construction equipment mix. This equipment mix accounts for both on-site construction equipment, as well as construction equipment required for off-site improvements. For the analysis, it was generally assumed that heavy construction equipment would be operating both on the Project site and at the off-site improvement areas for approximately 8 hours per day, 5 days per week (22 days per month) during Project construction. CalEEMod defaults were applied for the worker, haul, and vendor trips (CAPCOA 2017).

A detailed depiction of the construction schedule—including information regarding subphases, demolition, and equipment used during each subphase—is included in Appendix A of this report. The information contained in Appendix A was used as CalEEMod model inputs.

4.3 Operational Emissions Methodology

Emissions from the operational phase of the proposed Project were estimated using the CalEEMod. Operational year 2026 was assumed as it would be the first year following completion of construction.

The existing hospital generates GHG emissions, primarily associated with vehicular traffic. Emissions generated during operation of the existing facility were estimated to provide a baseline for comparison to projected operational emissions generated by buildout of the proposed Project. An operational year of 2020 was used to represent existing conditions because that is anticipated to be the last year of operation of the hospital before demolition of the site.

4.3.1 Area Sources

CalEEMod was used to estimate operational emissions from area sources for both the proposed Project and the existing hospital campus, including emissions from landscape maintenance equipment. Emissions associated with natural gas usage in space heating and water heating are calculated in the building energy use module of CalEEMod, as described in the following text.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chainsaws, and hedge trimmers. The emissions associated from landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days. For San Diego County, the average annual number of summer days is estimated at 180 days (CAPCOA 2017).

4.3.2 Energy Sources

As represented in CalEEMod, energy sources include GHG emissions associated with building electricity and natural gas usage (non-hearth).

CalEEMod default values for energy consumption for each land use were applied for analysis of the proposed project. The energy use from residential land uses is calculated in CalEEMod based on the California Residential End-Use Survey database. The program uses data collected during the Residential Appliance Saturation Survey to develop energy intensity values (electricity and natural gas usage per square foot per year) for residential buildings. Energy use in buildings (both natural gas and electricity) is divided by the program into end use categories subject to Title 24 requirements (end uses associated with the building envelope, such as the HVAC system, water heating system, and integrated lighting) and those not subject to Title 24 requirements (such as appliances, electronics, and miscellaneous "plug-in" uses).

Title 24 of the California Code of Regulations serves to enhance and regulate California's building standards. The most recent amendments to Title 24, Part 6, referred to as the 2016 standards, became effective on January 1, 2017. The emissions estimates in this analysis are based on compliance with the 2016 standards as they are the currently adopted standard. The 2019 Title 24 standards will take effect on January 1, 2020. Therefore, the project will likely be subject to the 2019 Title 24 standards. As new iterations of the Title 24 standards result in reduced energy demand and GHG emissions this analysis represents a conservative approach. Similarly, the project will include electric vehicle (EV) charging stations in accordance with the CALGreen and 2019 Title 24 standards. However, the EV charging stations were not quantified in this analysis.

4.3.3 Mobile Sources

To quantify emissions associated with project operational mobile sources, trip generation rates for each analyzed project land use were adjusted in CalEEMod to match the overall weekday daily trips (4,264 trips) provided by the traffic consultant (LLG 2020). CalEEMod default data, including trip characteristics, variable start information and emissions factors were conservatively used for the model inputs. Project-related traffic was assumed to include a mixture of vehicles consistent with CalEEMod default vehicle fleet assumptions. Emission factors for 2026 (the first year of project operation) were used to estimate emissions associated with full buildout of the proposed project.

To quantify emissions associated with the existing hospital, trip generation rates were adjusted in CalEEMod to match the overall weekday daily trips (2,120 trips) provided by the traffic consultant (LLG 2020). Similar to the proposed Project's CalEEMod default data for trip characteristics, variable start information and emissions factors were conservatively used for the model inputs. Traffic was assumed to include a mixture of vehicles, consistent with CalEEMod default vehicle fleet assumptions. Emissions factors for 2020 (the last year of operation for the existing hospital) were used to estimate existing emissions.

4.3.4 Solid Waste

The proposed Project would generate solid waste, and therefore, result in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste. A diversion rate of 75% was assumed for the proposed Project, which is consistent with the statewide goals outlined in AB 341.

4.3.5 Water and Wastewater

Supply, conveyance, treatment, and distribution of water for the proposed Project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the proposed Project requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment. Water consumption estimates for indoor and outdoor use were based on CalEEMod default assumptions for each land use type.

5 Project Impact Analysis

5.1 Potential to Generate Significant GHG Emissions

5.1.1 Construction Related GHG Emissions

Table 5, Estimated Annual Construction GHG Emissions, shows the estimated annual GHG construction emissions associated with the proposed Project by year. As discussed in Section 2.2 CO_2, CH_4, and N_2O are the primary GHGs generated during construction activities and are associated with incomplete combustion of fossil fuels.

Table 5. Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2020	337.72	0.08	0.00	339.72
2021	655.91	0.19	0.00	660.74
2022	1,103.34	0.12	0.00	1,106.28
2023	1,125.86	0.11	0.00	1,128.59
2024	1,114.54	0.11	0.00	1,117.24
2025	1,156.83	0.04	0.00	1,160.01
2026	478.24	0.04	0.00	479.35
Total	**5,972.45**	**0.69**	**0.00**	**5,991.93**
			Amortized over 30 years	**199.73**

Notes:
CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent
See Appendix A for complete results.

As shown in Table 5, estimated total proposed Project-generated construction GHG emissions are approximately 5,992 MT CO_2e over 6 years (2020 through 2026). The amortized construction GHG emissions over the lifetime of the proposed Project (30 years) would be approximately 200 MT CO_2e per year.

Because there is no separate GHG threshold for construction, the evaluation of significance is discussed in the operational emissions analysis below.

5.1.2 Operational GHG Emissions

As discussed in Section 4.3, the proposed Project would generate operational GHG emissions from area sources (landscape maintenance equipment), energy sources (natural gas and electricity consumption), mobile sources (vehicle trips), water supply and wastewater treatment, and solid waste. Table 6 presents the proposed Project's operational GHG emissions.

Table 6. Estimated Annual Operational GHG Emissions (2025)

Emissions Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Existing				
Area	0.03	>0.01	0.00	0.03
Energy	3,775.28	0.13	0.04	3,791.42
Mobile	2,062.90	0.11	0.00	2,065.76
Solid Waste	859.38	50.79	0.00	2,129.08
Water and Wastewater	258.94	1.61	0.04	311.14
			Existing Total	**8,297.43**
Proposed				
Area	330.023	0.49	>0.01	343.74
Energy	972.15	0.04	0.01	976.48
Mobile	3,723.91	0.19	0.00	3,728.54
Solid Waste	12.98	0.78	0.00	32.15
Water and Wastewater	213.52	1.15	0.03	250.94
			Proposed Total	**5,331.85**
			Amortized Construction Emissions	**199.73**
			Net Total	**-2,765.85**

Source: See Appendix A for detailed results.
Notes: Emissions were modeled with CalEEMod and are based on the "Mitigated" CalEEMod outputs. Numbers may not add exactly due to rounding. CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.

As shown in Table 6, the total proposed Project emissions during operation were estimated to be approximately 5,332 MT CO_2e per year which includes amortized construction emissions of 200 MT CO_2e per year. After accounting for the emissions generated from the existing hospital campus the project would produce a net negative amount of GHG emissions of -2,767 MT CO_2e. The proposed project would result in a net reduction of GHG emissions compared to existing conditions which is consistent with the goals outlined in CARB's Scoping Plan which is discussed in detail in Section 5.2. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

The proposed project's impact would be less than significant, and no mitigation would be required.

5.2 Consistency with Applicable Plans, Policies, and Regulations Adopted for the Purpose of Reducing GHG Emissions

Consistency with the E-CAP

The first approach to evaluate significance of the Project's GHG emissions is to evaluate the Project with respect to the City's E-CAP. As previously discussed, the City's E-CAP is only a certified GHG reduction plan, for the purposes of CEQA, through 2020 (14 CCR 15183.5). Although the Project's build-out year of 2025 post-dates the City's E-CAP, the E-CAP remains a relevant document for purposes of this EIR as it is an applicable planning document that has been adopted by the City (e.g., 14 CCR 15125(d)). Additionally, the City's E-CAP provides a useful benchmark for evaluating whether the Project is consistent with the planning framework developed by the City to achieve its AB 32-related emissions reduction objectives.

As discussed in Section 5.1, the Project would generate a net negative amount of GHG emissions (-2,388.67 CO_2e) after accounting for the GHG emissions associated with the existing hospital and would not exceed the E-CAP's screening threshold of 2,500 CO_2e. therefore would be consistent with the City's E-CAP.

Based on the attributes of the Project and the density of residential development proposed in comparison to the site's existing zoning, implementation of the Project would not result in development in excess of that anticipated in the E-CAP or increases in population/housing growth beyond those contemplated by SANDAG or the City. As such, the Project would not conflict with or obstruct implementation of the E-CAP, and therefore, impacts associated with consistency with the E-CAP would be less than significant.

Consistency with SANDAG'S San Diego Forward: The Regional Plan

Regarding consistency with SANDAG's Regional Plan, the proposed Project would be developed to support the policy objectives of the RTP and SB 375. For example, the proposed Project would develop a mixed use community that would include residential uses, supported activities, and commercial amenities. Additionally, because this proposed project is an infill project, it would have inherently less VMT than a project located at the outskirts of a city.

SANDAG's Regional Plan is a regional growth-management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks in the San Diego region. The Regional Plan will integrate land use and transportation strategies that will achieve GHG emissions reduction targets that are forecasted to achieve reduction in GHG emissions to achieve the state's 2035 and 2050 GHG reduction goals. The Regional Plan incorporates local land use projections and circulation networks in city and county general plans. Typically, a project would be consistent with the Regional Plan if the project does not exceed the underlying growth assumptions within the Regional Plan.

Implementation of the proposed project would result in an increase in 510 residential units. SANDAG's 2050 Regional Growth Forecast, adopted in October 2013, is the current growth forecast, and estimates that the City would have 53,605 units in 2020 and 55,633 units in 2035 (SANDAG 2013). This would equate to an additional 135 units per year from 2020 to 2035. The proposed project is expected to bring 510 units to market in 2025. However, the units will be released to the public in phases as they are constructed and on average would be 128 units per year and thus would be within SANDAG's growth projection for housing for that year. Therefore, the proposed project would not conflict with SANDAG's regional growth forecast for population and housing for the City.

The Regional Plan includes, for the San Diego County region as a whole, a daily 26 Total VMT per capita forecast for the 2005 Base Year, and a daily 21.83 Total VMT per capita forecast for the 2020 Plan Year, 20.48 Total VMT per capita forecast for the 2035 Plan Year, and 19.9 Total VMT per capita forecast for the 2050 Plan Year. To analyze the consistency of the proposed project with the Regional Plan, the proposed project's Total Daily VMT was divided by the proposed project's service population to arrive at the per capita Total Daily VMT estimates. The Total proposed project daily VMT in 2025 is estimated to be 28,839 per the VMT estimate calculated in CalEEMod[4]. The total service population for the proposed project is 1,571. Therefore, the Total VMT per capita in 2025 would be 18.81 for the proposed project. The Total proposed project VMT per capita of 18.81 would be less than the overall SANDAG region's daily 20.48 Total VMT per capita for the 2035 Plan Year and 19.9 daily Total VMT per capita for the 2050 Plan Year. Therefore, the proposed project would be consistent with the Total VMT per capita, growth projections, and GHG reductions assumed within the Regional Plan.

Table 7 illustrates the proposed Project's consistency with applicable goals and policies of *San Diego Forward: The Regional Plan* (SANDAG 2015).

Table 7. San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
The Regional Plan – Policy Objectives		
Mobility Choices	Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people live, work, and play.	*Not applicable.* The proposed Project would not impair the ability of SANDAG to provide additional transportation choices within the region.
Mobility Choices	Take advantage of new technologies to make the transportation system more efficient and environmentally friendly.	*Not applicable.* The proposed Project would not impair the ability of SANDAG to implement new technologies within the transportation system within the region.
Habitat and Open Space Preservation	Focus growth in areas that are already urbanized, allowing the region to set aside and restore more open space in our less developed areas.	*Consistent.* The proposed Project would not impact any open space. The proposed Project would redevelop existing hospital campus land to provide high density housing.
Habitat and Open Space Preservation	Protect and restore our region's urban canyons, coastlines, beaches, and water resources.	*Consistent.* The proposed Project would be located on an already utilized site that has been used for medical services. The proposed Project would not impact any open space.
Regional Economic Prosperity	Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.	*Not Applicable.* The proposed Project would not impair the ability of SANDAG to invest in transportation projects available to all members of the Community.
Regional Economic Prosperity	Build infrastructure that makes the movement of freight in our community more efficient and environmentally friendly.	*Not Applicable.* The proposed Project does not propose regional freight movement, nor would it impair SANDAG's ability to preserve and expand options for regional freight movement.

[4] The project specific VMT estimate calculated in the Traffic Impact Analysis was 21,772 This report's VMT estimate of 28,839 represent a conservative estimate to assess consistency with the Regional Plan.

Table 7. San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
Partnerships/Collaboration	Collaborate with Native American tribes, Mexico, military bases, neighboring counties, infrastructure providers, the private sector, and local communities To design a transportation system that connects to the mega-region and national network, and works for everyone and fosters a high quality of life for all.	*Not Applicable.* The proposed Project would not impair the ability of SANDAG to provide transportation choices to better connect the San Diego region with Mexico, neighboring counties, and tribal nations.
Partnerships/Collaboration	As we plan for our region, recognize the vital economic, environmental, cultural, and community linkages between the San Diego region and Baja California.	*Not Applicable.* The proposed Project would not impair the ability of SANDAG to provide transportation choices to better connect the San Diego region with Mexico.
Healthy and Complete Communities	Create great places for everyone to live, work, and play.	*Does not conflict.* The proposed Project would develop residential units and commercial amenities in the downtown Escondido area near existing services. The proposed Project would not impair the SANDAG to provide healthy and complete communities.
Healthy and Complete Communities	Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.	*Not Applicable.* The proposed Project would not impair the ability for SANDAG to create additional transportation opportunities to promote a healthy lifestyle.
Environmental Stewardship	Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.	*Consistent.* The proposed Project would promote walkability and alternative transportation being centrally located in an existing downtown area. Thus the proposed Project would help reduce the local GHG and air emissions.
Environmental Stewardship	Support energy programs that promote sustainability.	*Not Applicable.* The proposed Project would not impair the ability for SANDAG to support sustainable energy programs in the County.
Sustainable Communities Strategy (SCS) – Strategies		
Strategy #1	Focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, including transit.	*Consistent.* The proposed Project would be located near major urban and employment centers.
Strategy #2	Protect the environment and help ensure the success of smart growth land use policies by preserving sensitive habitat, open space, cultural resources, and farmland.	*Consistent.* The proposed Project would not impact any sensitive habitat or open space as it would be located on existing developed land.
Strategy #3	Invest in a transportation network that gives people transportation choices and reduces GHG emissions.	*Not Applicable.* The proposed Project would not impair SANDAG's ability to invest in transportation network choices that reduce GHG emissions.
Strategy #4	Address the housing needs of all economic segments of the population.	*Consistent.* The proposed Project would develop 510 multi-family residential units, including a mix senior housing, rowhomes and midrise apartment buildings.

Table 7. San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
Strategy #5	Implement the Regional Plan through incentives and collaboration.	*Not Applicable.* The proposed Project would not impair the ability of SANDAG to implement the RTP through incentives and collaborations.

Source: SANDAG 2015.

As shown in Table 7, the proposed Project is consistent with applicable Policy Objectives and Strategies from the Regional Plan.

Consistency with CARB's Scoping Plan

The Scoping Plan, approved by CARB on December 12, 2008, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. Relatedly, in the Final Statement of Reasons for the Amendments to the CEQA Guidelines, the CNRA observed that "[t]he [Scoping Plan] may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009a). Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., low-carbon fuel standard), among others. The proposed project would comply with all applicable regulations adopted in furtherance of the Scoping Plan to the extent required by law.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 8 highlights measures that have been developed under the Scoping Plan and the proposed project's consistency with Scoping Plan measures. The table also includes measures proposed in the 2017 Scoping Plan Update. To the extent that these regulations are applicable to the proposed project, its inhabitants, or uses, the proposed project would comply with all applicable regulations adopted in furtherance of the Scoping Plan.

Table 8. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	*Does not conflict.* The proposed project's residents would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
1.5 million zero-emission and plug-in hybrid light-duty electric vehicles by 2025 (4.2 million Zero-Emissions Vehicles by 2030)	Proposed	The proposed project includes EV charging stations per 2019 title 24 standards.
Low Carbon Fuel Standard	T-2	*Does not conflict.* Motor vehicles driven by the proposed project's residents would use compliant fuels.

Table 8. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Low Carbon Fuel Standard (18 percent reduction in carbon intensity by 2030)	Proposed	*Does not conflict.* Motor vehicles driven by the proposed project's residents would use compliant fuels.
Regional Transportation-Related GHG Targets	T-3	*Does not conflict.* The proposed project would encourage use of alternative forms of transportation.
Advanced Clean Transit	Proposed	*Not Applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Last Mile Delivery	Proposed	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduction in Vehicle Miles Traveled	Proposed	*Consistent.* The proposed project is located on an infill site, which promotes compact walkable communities with an emphasis on proximity and accessibility.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing	T-4	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Ship Electrification at Ports (Shore Power)	T-5	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	T-6	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
California Sustainable Freight Action Plan	Proposed	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Heavy-Duty Vehicle GHG Emission Reduction 1. Tractor-Trailer GHG Regulation 2. Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project	T-8	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 8. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Medium and Heavy-Duty GHG Phase 2	Proposed	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
High-Speed Rail	T-9	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	*Consistent.* The proposed project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	*Consistent.* The proposed project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	The proposed project will comply with current Title 24, Part 6, of the California Code of Regulations regarding solar water heating at the time of building construction.
Combined Heat and Power	E-2	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Renewable Portfolios Standard (33 percent by 2020)	E-3	*Consistent.* The proposed project would use energy supplied by San Diego Gas and Electric, which is in compliance with the Renewable Portfolio Standard.
Renewable Portfolios Standard (50 percent by 2050)	Proposed	*Consistent.* The proposed project would use energy supplied by San Diego Gas and Electric, which is in compliance with the Renewable Portfolio Standard.
Senate Bill 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	*Consistent.* The proposed project will comply with current Title 24, Part 6, of the California Code of Regulations regarding rooftop solar at the time of building construction.
Water Sector		
Water Use Efficiency	W-1	*Consistent.* The proposed project would utilize water saving features including low-flow fixtures and non-potable water for landscape irrigation.
Water Recycling	W-2	Does not conflict. Recycled water is not currently available for use on site. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Water System Energy Efficiency	W-3	*Not applicable.* This is applicable for the transmission and treatment of water, but it is not applicable for the proposed project.
Reuse Urban Runoff	W-4	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Renewable Energy Production	W-5	*Not applicable.* Applicable for wastewater treatment systems. Not applicable for the proposed project.

Table 8. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	*Consistent.* The proposed project would be required to be constructed in compliance with state or local green building standards in effect at the time of building construction.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-2	*Consistent.* The proposed project's buildings would meet green building standards that are in effect at the time of construction.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-3	*Consistent.* The proposed project would be required to be constructed in compliance with local green building standards in effect at the time of building construction.
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-4	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Oil and Gas Extraction GHG Emission Reduction	I-2	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduce GHG Emissions by 20 percent in Oil Refinery Sector	Proposed	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Refinery Flare Recovery Process Improvements	I-4	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks	I-5	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Increasing the Efficiency of Landfill Methane Capture	RW-2	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 8. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Mandatory Commercial Recycling	RW-3	*Consistent.* During both construction and operation of the proposed project, the proposed project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended.
Increase Production and Markets for Compost and Other Organics	RW-4	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Anaerobic/Aerobic Digestion	RW-5	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Extended Producer Responsibility	RW-6	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Environmentally Preferable Purchasing	RW-7	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Forests Sector		
Sustainable Forest Target	F-1	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
High Global Warming Potential Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
SF_6 Limits in Non-Utility and Non-Semiconductor Applications	H-2	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduction of Perfluorocarbons in Semiconductor Manufacturing	H-3	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Limit High Global Warming Potential Use in Consumer Products	H-4	*Not applicable.* The proposed project's residents would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 8. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
SF_6 Leak Reduction Gas Insulated Switchgear	H-6	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
40 percent reduction in methane and hydrofluorocarbon emissions	Proposed	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
50 percent reduction in black carbon emissions	Proposed	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	*Not applicable.* This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Source: CARB 2008, 2017b.
Notes: CARB = California Air Resources Board; GHG = greenhouse gas; proposed project = Palomar Heights

Based on the analysis in Table 8, the proposed project would be consistent with the applicable strategies and measures in the Scoping Plan.

In addition to the measures outlined in the Table 8, the Scoping Plan also highlights, in several areas, the goals and importance of infill projects. Specifically, the Scoping Plan calls out an ongoing and proposed measure to streamline CEQA compliance and other barriers to infill development. The plan encourages infill projects and sees them as crucial to achieving the State's long-term climate goals. The plan encourages accelerating equitable and affordable infill development through enhanced financing and policy incentives and mechanisms. As the project consists of a redevelopment of an existing hospital within a central downtown location within the City, the proposed Project would support the Scoping Plan's goals regarding infill development.

The State will complete an Integrated Natural and Working Lands Climate Change Action Plan by 2018, which will consider aggregation of eco-regional plans and efforts to achieve net sequestration goals. The Action Plan will include goals and plans to promote and provide incentives for infill development through community revitalization and urban greening and promote the adoption of regional transportation and development plans, such as SB 375 Sustainable Communities Strategies and Climate Action Plans, that prioritize infill and compact development and also consider the climate change impacts of land use and management.

The following strategies were outlined to expand infill development within the scoping plan:

- Encouraging regional Transfer of Development Rights programs to allow owners of natural and working lands to sell their development rights to developers who can use those rights to add additional density to development projects in preferred infill areas.
- Promoting regional Transit-Oriented Development funds that leverage public resources with private-sector investment capital to provide flexible capital for Transit-Oriented Development projects.
- Rebates for low-VMT/location-efficient housing, similar to programs that use rebates to encourage adoption of energy-efficient appliances, ZEVs, water-efficient yards, or renewable energy installation. For example,

the rebate could reimburse residents for a portion of the down payment for purchasing or renting a qualified home in exchange for a minimum term of residence.

- Promotion of cross-subsidizing multi-station financing districts along transit corridors to leverage revenues from development in strong-market station areas in order to seed needed infrastructure and development in weaker-market station areas.
- Abatement of residential property tax increases in exchange for property-based improvements in distressed infill areas.
- Ways to promote reduced parking in areas where viable transportation alternatives are present.
- Additional creative financing mechanisms to enhance the viability of priority infill projects.
- Ways to promote and strengthen Urban Growth Boundaries to promote infill development and conservation of natural and working lands by defining and limiting developable land within a metropolitan area according to projected growth needs.

In summary, the proposed project would be consistent with the measures and policy goals as shown in Table 8, Project Consistency with Scoping Plan GHG Emission Reduction Strategies. The proposed project would also be consistent with the various efforts the Scoping Plan established to encourage infill development projects. Therefore, the proposed project would be consistent with CARB's Scoping Plan.

Finally, the SDAPCD has not adopted GHG reduction measures that would apply to the GHG emissions associated with the proposed project. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

The proposed project's impact would be less than significant, and no mitigation would be required.

6 References

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7 List of Preparers

Nicholas Lorenzen	Air Quality Specialist
Adam Poll	Air Quality Specialist

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Appendix A

Emission Calculations

Palamor Heights - Existing

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	392.00	1000sqft	4.47	392,001.00	0
Enclosed Parking with Elevator	511.00	Space	4.60	204,400.00	0
Parking Lot	526.00	Space	4.73	210,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Operational year of 2020.

Land Use - No construction.

Construction Phase - no

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Trips and VMT - No construction.

Grading - No construction.

Vehicle Trips - Based on Traffic Report.

Fleet Mix - CalEEMod Defaults.

Vehicle Emission Factors - CalEEMod Defaults.

Vehicle Emission Factors - CalEEMod Defaults.

Vehicle Emission Factors - CalEEMod Defaults.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	30.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	10.00	0.00
tblLandUse	LandUseSquareFeet	392,000.00	392,001.00
tblLandUse	LotAcreage	9.00	4.47
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
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tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	PrecipitationFrequency	40	31
tblTripsAndVMT	VendorTripNumber	132.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	300.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	60.00	0.00
tblVehicleTrips	ST_TR	10.18	4.15
tblVehicleTrips	SU_TR	8.91	3.63
tblVehicleTrips	WD_TR	13.22	5.41

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	2.0277	1.2000e-004	0.0132	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0255	0.0255	7.0000e-005	0.0000	0.0273
Energy	0.1225	1.1139	0.9357	6.6800e-003		0.0847	0.0847		0.0847	0.0847	0.0000	3,775.2805	3,775.2805	0.1264	0.0436	3,791.4249

Mobile	0.6106	2.6735	7.0411	0.0224	1.8609	0.0226	1.8835	0.4981	0.0213	0.5194	0.0000	2,062.9038	2,062.9038	0.1143	0.0000	2,065.7620
Waste						0.0000	0.0000		0.0000	0.0000	859.3825	0.0000	859.3825	50.7881	0.0000	2,129.0839
Water						0.0000	0.0000		0.0000	0.0000	15.6052	243.3332	258.9384	1.6126	0.0399	311.1353
Total	**2.7608**	**3.7875**	**7.9900**	**0.0291**	**1.8609**	**0.1074**	**1.9682**	**0.4981**	**0.1060**	**0.6041**	**874.9877**	**6,081.5430**	**6,956.5308**	**52.6414**	**0.0834**	**8,297.4333**

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	2.0277	1.2000e-004	0.0132	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0255	0.0255	7.0000e-005	0.0000	0.0273
Energy	0.1225	1.1139	0.9357	6.6800e-003		0.0847	0.0847		0.0847	0.0847	0.0000	3,775.2805	3,775.2805	0.1264	0.0436	3,791.4249
Mobile	0.6106	2.6735	7.0411	0.0224	1.8609	0.0226	1.8835	0.4981	0.0213	0.5194	0.0000	2,062.9038	2,062.9038	0.1143	0.0000	2,065.7620
Waste						0.0000	0.0000		0.0000	0.0000	859.3825	0.0000	859.3825	50.7881	0.0000	2,129.0839
Water						0.0000	0.0000		0.0000	0.0000	15.6052	243.3332	258.9384	1.6126	0.0399	311.1353
Total	**2.7608**	**3.7875**	**7.9900**	**0.0291**	**1.8609**	**0.1074**	**1.9682**	**0.4981**	**0.1060**	**0.6041**	**874.9877**	**6,081.5430**	**6,956.5308**	**52.6414**	**0.0834**	**8,297.4333**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2020	5/31/2020	5	0	

2	Site Preparation	Site Preparation	6/27/2020	6/26/2020	5	0	
3	Grading	Grading	7/11/2020	7/10/2020	5	0	
4	Building Construction	Building Construction	8/22/2020	8/21/2020	5	0	
5	Paving	Paving	10/16/2021	10/15/2021	5	0	
6	Architectural Coating	Architectural Coating	11/13/2021	11/12/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 9.33

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 588,002; Non-Residential Outdoor: 196,001; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	0.00	97	0.37
Grading	Excavators	2	0.00	158	0.38
Grading	Graders	1	0.00	187	0.41
Grading	Rubber Tired Dozers	1	0.00	247	0.40
Grading	Scrapers	2	0.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	0.00	97	0.37
Building Construction	Cranes	1	0.00	231	0.29
Building Construction	Forklifts	3	0.00	89	0.20
Building Construction	Generator Sets	1	0.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	0.00	97	0.37
Building Construction	Welders	1	0.00	46	0.45
Paving	Pavers	2	0.00	130	0.42
Paving	Paving Equipment	2	0.00	132	0.36

Paving	Rollers	2	0.00	80	0.38
Architectural Coating	Air Compressors	1	0.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

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

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

3.4 Grading - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

3.5 Building Construction - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

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

3.6 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6106	2.6735	7.0411	0.0224	1.8609	0.0226	1.8835	0.4981	0.0213	0.5194	0.0000	2,062.9038	2,062.9038	0.1143	0.0000	2,065.7620
Unmitigated	0.6106	2.6735	7.0411	0.0224	1.8609	0.0226	1.8835	0.4981	0.0213	0.5194	0.0000	2,062.9038	2,062.9038	0.1143	0.0000	2,065.7620

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Hospital	2,120.00	1,626.80	1422.96	4,910,862	4,910,862
Parking Lot	0.00	0.00	0.00		
Total	2,120.00	1,626.80	1,422.96	4,910,862	4,910,862

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
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
Enclosed Parking with Elevator	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Hospital	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,562.6254	2,562.6254	0.1032	0.0213	2,571.5636
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,562.6254	2,562.6254	0.1032	0.0213	2,571.5636
NaturalGas Mitigated	0.1225	1.1139	0.9357	6.6800e-003		0.0847	0.0847		0.0847	0.0847	0.0000	1,212.6551	1,212.6551	0.0232	0.0222	1,219.8613
NaturalGas Unmitigated	0.1225	1.1139	0.9357	6.6800e-003		0.0847	0.0847		0.0847	0.0847	0.0000	1,212.6551	1,212.6551	0.0232	0.0222	1,219.8613

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					
Enclosed Parking with Elevator	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
Hospital	2.27243e+007	0.1225	1.1139	0.9357	6.6800e-003		0.0847	0.0847		0.0847	0.0847	0.0000	1,212.6551	1,212.6551	0.0232	0.0222	1,219.8613
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		**0.1225**	**1.1139**	**0.9357**	**6.6800e-003**		**0.0847**	**0.0847**		**0.0847**	**0.0847**	**0.0000**	**1,212.6551**	**1,212.6551**	**0.0232**	**0.0222**	**1,219.8613**

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					
Enclosed Parking with Elevator	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

Hospital	2.27243e+007	0.1225	1.1139	0.9357	6.6800e-003		0.0847	0.0847		0.0847	0.0847	0.0000	1,212.6551	1,212.6551	0.0232	0.0222	1,219.8613
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		**0.1225**	**1.1139**	**0.9357**	**6.6800e-003**		**0.0847**	**0.0847**		**0.0847**	**0.0847**	**0.0000**	**1,212.6551**	**1,212.6551**	**0.0232**	**0.0222**	**1,219.8613**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.19778e+006	391.4463	0.0158	3.2600e-003	392.8116
Hospital	6.56994e+006	2,147.1129	0.0864	0.0179	2,154.6019
Parking Lot	73640	24.0662	9.7000e-004	2.0000e-004	24.1501
Total		**2,562.6254**	**0.1032**	**0.0213**	**2,571.5636**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.19778e+006	391.4463	0.0158	3.2600e-003	392.8116
Hospital	6.56994e+006	2,147.1129	0.0864	0.0179	2,154.6019
Parking Lot	73640	24.0662	9.7000e-004	2.0000e-004	24.1501
Total		**2,562.6254**	**0.1032**	**0.0213**	**2,571.5636**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.0277	1.2000e-004	0.0132	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0255	0.0255	7.0000e-005	0.0000	0.0273
Unmitigated	2.0277	1.2000e-004	0.0132	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0255	0.0255	7.0000e-005	0.0000	0.0273

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	0.4687					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2400e-003	1.2000e-004	0.0132	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0255	0.0255	7.0000e-005	0.0000	0.0273
Total	**2.0277**	**1.2000e-004**	**0.0132**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0255**	**0.0255**	**7.0000e-005**	**0.0000**	**0.0273**

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	0.4687					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2400e-003	1.2000e-004	0.0132	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0255	0.0255	7.0000e-005	0.0000	0.0273
Total	**2.0277**	**1.2000e-004**	**0.0132**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0255**	**0.0255**	**7.0000e-005**	**0.0000**	**0.0273**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	258.9384	1.6126	0.0399	311.1353
Unmitigated	258.9384	1.6126	0.0399	311.1353

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hospital	49.1884 / 9.36921	258.9384	1.6126	0.0399	311.1353
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**258.9384**	**1.6126**	**0.0399**	**311.1353**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hospital	49.1884 / 9.36921	258.9384	1.6126	0.0399	311.1353
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**258.9384**	**1.6126**	**0.0399**	**311.1353**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	859.3825	50.7881	0.0000	2,129.0839
Unmitigated	859.3825	50.7881	0.0000	2,129.0839

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hospital	4233.6	859.3825	50.7881	0.0000	2,129.0839
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**859.3825**	**50.7881**	**0.0000**	**2,129.0839**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hospital	4233.6	859.3825	50.7881	0.0000	2,129.0839

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**859.3825**	**50.7881**	**0.0000**	**2,129.0839**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Palomar Heights

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	3.00	1000sqft	0.07	3,000.00	0
Parking Lot	915.00	Space	7.00	366,000.00	0
Health Club	2.00	1000sqft	0.05	2,000.00	0
Quality Restaurant	3.00	1000sqft	0.07	3,000.00	0
Apartments Mid Rise	258.00	Dwelling Unit	3.00	258,000.00	738
Condo/Townhouse High Rise	162.00	Dwelling Unit	2.53	162,000.00	463
Retirement Community	90.00	Dwelling Unit	1.00	58,000.00	257
Strip Mall	4.00	1000sqft	0.09	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	640.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - The CO2 intensity factor for SDG&E was modified to reflect compliance with the RPS for the operational year.

Land Use - Building square footages were updated to reflect the project specifics.

Construction Phase - The construction scheudle was provided by the project applicant.

Trips and VMT - Construction trip data was provided by the project applicant.

Demolition - Demolition of the existing 392,001 hospital campus.

Grading - model defaults.

Architectural Coating - Compliance with SDAPCD rule 67.0.1

Vehicle Trips - Consistient with traffic report

Woodstoves - No wood fireplaces

Energy Use - Model defaults.

Construction Off-road Equipment Mitigation - Complinace with SDAPCD Fugitive dust rule

Waste Mitigation - 75% Diverson rate in compliance with AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	6,000.00	3,500.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	18,000.00	10,500.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	322,650.00	343,389.00
tblArchitecturalCoating	ConstArea_Residential_Interior	967,950.00	1,030,168.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	300.00	1,129.00
tblConstructionPhase	NumDays	20.00	153.00
tblConstructionPhase	NumDays	30.00	152.00
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	20.00	63.00
tblConstructionPhase	NumDays	10.00	85.00
tblFireplaces	NumberWood	90.30	0.00
tblFireplaces	NumberWood	56.70	0.00
tblFireplaces	NumberWood	31.50	0.00

tblGrading	MaterialImported	0.00	15,470.00
tblLandUse	LandUseSquareFeet	90,000.00	58,000.00
tblLandUse	LotAcreage	8.23	7.00
tblLandUse	LotAcreage	6.79	3.00
tblLandUse	LotAcreage	18.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	720.49	640.44
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	525.00	526.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	105.00	106.00
tblVehicleTrips	ST_TR	6.39	6.25
tblVehicleTrips	ST_TR	4.31	8.24
tblVehicleTrips	ST_TR	2.46	4.46
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	2.03	6.25
tblVehicleTrips	ST_TR	42.04	90.11
tblVehicleTrips	SU_TR	5.86	5.28
tblVehicleTrips	SU_TR	3.43	6.39
tblVehicleTrips	SU_TR	1.05	1.90
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	1.95	5.28
tblVehicleTrips	SU_TR	20.43	59.80
tblVehicleTrips	WD_TR	6.65	6.00
tblVehicleTrips	WD_TR	4.18	8.00
tblVehicleTrips	WD_TR	11.03	20.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	89.95	160.00
tblVehicleTrips	WD_TR	2.40	4.00
tblVehicleTrips	WD_TR	44.32	130.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2650	2.7968	1.7550	3.7600e-003	0.2204	0.1278	0.3482	0.0364	0.1188	0.1552	0.0000	337.7187	337.7187	0.0799	0.0000	339.7156
2021	0.5166	5.6085	3.5328	7.3800e-003	1.4599	0.2467	1.7066	0.7043	0.2269	0.9312	0.0000	655.9078	655.9078	0.1934	0.0000	660.7436
2022	0.4800	3.5823	4.0795	0.0121	0.5987	0.1144	0.7131	0.1612	0.1074	0.2686	0.0000	1,103.3439	1,103.3439	0.1173	0.0000	1,106.2762
2023	0.4511	3.1609	3.9389	0.0123	0.6484	0.0961	0.7445	0.1746	0.0903	0.2650	0.0000	1,125.8643	1,125.8643	0.1091	0.0000	1,128.5910
2024	0.4296	3.0338	3.8497	0.0122	0.6534	0.0854	0.7388	0.1760	0.0803	0.2562	0.0000	1,114.5373	1,114.5373	0.1082	0.0000	1,117.2430
2025	0.4437	3.1396	4.1941	0.0127	0.6550	0.0870	0.7420	0.1764	0.0815	0.2578	0.0000	1,156.8388	1,156.8388	0.1268	0.0000	1,160.0086
2026	2.3193	1.2239	1.6553	5.2300e-003	0.3043	0.0327	0.3369	0.0818	0.0309	0.1127	0.0000	478.2365	478.2365	0.0444	0.0000	479.3474
Maximum	**2.3193**	**5.6085**	**4.1941**	**0.0127**	**1.4599**	**0.2467**	**1.7066**	**0.7043**	**0.2269**	**0.9312**	**0.0000**	**1,156.8388**	**1,156.8388**	**0.1934**	**0.0000**	**1,160.0086**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2650	2.7968	1.7550	3.7600e-003	0.1130	0.1278	0.2407	0.0201	0.1188	0.1389	0.0000	337.7184	337.7184	0.0799	0.0000	339.7153
2021	0.5166	5.6085	3.5328	7.3800e-003	0.6751	0.2467	0.9218	0.3218	0.2269	0.5487	0.0000	655.9071	655.9071	0.1934	0.0000	660.7430

2022	0.4800	3.5823	4.0795	0.0121	0.5987	0.1144	0.7131	0.1612	0.1074	0.2686	0.0000	1,103.3435	1,103.3435	0.1173	0.0000	1,106.2759
2023	0.4511	3.1609	3.9389	0.0123	0.6484	0.0961	0.7445	0.1746	0.0903	0.2650	0.0000	1,125.8639	1,125.8639	0.1091	0.0000	1,128.5907
2024	0.4296	3.0338	3.8497	0.0122	0.6534	0.0854	0.7388	0.1760	0.0803	0.2562	0.0000	1,114.5369	1,114.5369	0.1082	0.0000	1,117.2426
2025	0.4437	3.1396	4.1941	0.0127	0.6550	0.0870	0.7420	0.1764	0.0815	0.2578	0.0000	1,156.8384	1,156.8384	0.1268	0.0000	1,160.0081
2026	2.3193	1.2239	1.6553	5.2300e-003	0.3043	0.0327	0.3369	0.0818	0.0309	0.1127	0.0000	478.2363	478.2363	0.0444	0.0000	479.3472
Maximum	**2.3193**	**5.6085**	**4.1941**	**0.0127**	**0.6751**	**0.2467**	**0.9218**	**0.3218**	**0.2269**	**0.5487**	**0.0000**	**1,156.8384**	**1,156.8384**	**0.1934**	**0.0000**	**1,160.0081**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**19.65**	**0.00**	**16.74**	**26.40**	**0.00**	**17.75**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-1-2020**	**8-31-2020**	1.3128	1.3128
2	**9-1-2020**	**11-30-2020**	1.2995	1.2995
3	**12-1-2020**	**2-28-2021**	1.3186	1.3186
4	**3-1-2021**	**5-31-2021**	1.5601	1.5601
5	**6-1-2021**	**8-31-2021**	1.7533	1.7533
6	**9-1-2021**	**11-30-2021**	1.7403	1.7403
7	**12-1-2021**	**2-28-2022**	0.7464	0.7464
8	**3-1-2022**	**5-31-2022**	1.0424	1.0424
9	**6-1-2022**	**8-31-2022**	1.0386	1.0386
10	**9-1-2022**	**11-30-2022**	1.0348	1.0348
11	**12-1-2022**	**2-28-2023**	0.9424	0.9424
12	**3-1-2023**	**5-31-2023**	0.9108	0.9108
13	**6-1-2023**	**8-31-2023**	0.9072	0.9072
14	**9-1-2023**	**11-30-2023**	0.9044	0.9044
15	**12-1-2023**	**2-29-2024**	0.8788	0.8788
16	**3-1-2024**	**5-31-2024**	0.8667	0.8667
17	**6-1-2024**	**8-31-2024**	0.8633	0.8633

18	**9-1-2024**	**11-30-2024**	0.8606	0.8606
19	**12-1-2024**	**2-28-2025**	1.0335	1.0335
20	**3-1-2025**	**5-31-2025**	0.9208	0.9208
21	**6-1-2025**	**8-31-2025**	0.8188	0.8188
22	**9-1-2025**	**11-30-2025**	0.8163	0.8163
23	**12-1-2025**	**2-28-2026**	1.8487	1.8487
24	**3-1-2026**	**5-31-2026**	1.9831	1.9831
		Highest	1.9831	1.9831

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	3.3681	0.3114	8.5924	0.0168		0.8063	0.8063		0.8063	0.8063	103.0894	227.1380	330.2275	0.4921	4.0500e-003	343.7376
Energy	0.0256	0.2205	0.1063	1.4000e-003		0.0177	0.0177		0.0177	0.0177	0.0000	972.1506	972.1506	0.0374	0.0114	976.4764
Mobile	0.9284	3.7849	10.7797	0.0402	3.9341	0.0318	3.9659	1.0533	0.0295	1.0828	0.0000	3,723.9067	3,723.9067	0.1855	0.0000	3,728.5431
Waste						0.0000	0.0000		0.0000	0.0000	51.9109	0.0000	51.9109	3.0679	0.0000	128.6070
Water						0.0000	0.0000		0.0000	0.0000	11.1315	202.3915	213.5229	1.1525	0.0289	250.9446
Total	**4.3221**	**4.3168**	**19.4784**	**0.0584**	**3.9341**	**0.8558**	**4.7899**	**1.0533**	**0.8536**	**1.9068**	**166.1318**	**5,125.5868**	**5,291.7185**	**4.9353**	**0.0443**	**5,428.3087**

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	3.3681	0.3114	8.5924	0.0168		0.8063	0.8063		0.8063	0.8063	103.0894	227.1380	330.2275	0.4921	4.0500e-003	343.7376
Energy	0.0256	0.2205	0.1063	1.4000e-003		0.0177	0.0177		0.0177	0.0177	0.0000	972.1506	972.1506	0.0374	0.0114	976.4764
Mobile	0.9284	3.7849	10.7797	0.0402	3.9341	0.0318	3.9659	1.0533	0.0295	1.0828	0.0000	3,723.9067	3,723.9067	0.1855	0.0000	3,728.5431
Waste						0.0000	0.0000		0.0000	0.0000	12.9777	0.0000	12.9777	0.7670	0.0000	32.1518
Water						0.0000	0.0000		0.0000	0.0000	11.1315	202.3915	213.5229	1.1525	0.0289	250.9446
Total	**4.3221**	**4.3168**	**19.4784**	**0.0584**	**3.9341**	**0.8558**	**4.7899**	**1.0533**	**0.8536**	**1.9068**	**127.1986**	**5,125.5868**	**5,252.7854**	**2.6344**	**0.0443**	**5,331.8534**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**23.44**	**0.00**	**0.74**	**46.62**	**0.00**	**1.78**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2020	12/30/2020	5	153	
2	Site Preparation	Site Preparation	1/4/2021	4/30/2021	5	85	
3	Grading	Grading	5/1/2021	11/30/2021	5	152	
4	Paving 1 - Internal road construction	Paving	11/30/2021	2/28/2022	5	65	
5	Building Construction	Building Construction	2/1/2022	5/29/2026	5	1129	
6	Paving 2 - paved areas	Paving	1/1/2025	3/28/2025	5	63	
7	Architectural Coating	Architectural Coating	1/2/2026	5/5/2026	5	88	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 380

Acres of Paving: 7

Residential Indoor: 1,030,168; Residential Outdoor: 343,389; Non-Residential Indoor: 10,500; Non-Residential Outdoor: 3,500; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	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 1 - Internal road construction	Pavers	2	8.00	130	0.42
Paving 1 - Internal road construction	Paving Equipment	2	8.00	132	0.36
Paving 1 - Internal road construction	Rollers	2	8.00	80	0.38
Paving 2 - paved areas	Pavers	2	8.00	130	0.42
Paving 2 - paved areas	Paving Equipment	2	8.00	132	0.36
Paving 2 - paved areas	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	16.00	0.00	1,783.00	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	1,530.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	526.00	116.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 1 - Internal road construction	6	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2 - paved areas	6	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	106.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1953	0.0000	0.1953	0.0296	0.0000	0.0296	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2534	2.5399	1.6641	2.9700e-003		0.1269	0.1269		0.1180	0.1180	0.0000	260.0893	260.0893	0.0734	0.0000	261.9249
Total	**0.2534**	**2.5399**	**1.6641**	**2.9700e-003**	**0.1953**	**0.1269**	**0.3222**	**0.0296**	**0.1180**	**0.1475**	**0.0000**	**260.0893**	**260.0893**	**0.0734**	**0.0000**	**261.9249**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.1300e-003	0.2536	0.0581	6.9000e-004	0.0153	8.0000e-004	0.0161	4.1900e-003	7.7000e-004	4.9600e-003	0.0000	68.7568	68.7568	6.1900e-003	0.0000	68.9116

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5100e-003	3.3400e-003	0.0328	1.0000e-004	9.8200e-003	7.0000e-005	9.8900e-003	2.6100e-003	7.0000e-005	2.6700e-003	0.0000	8.8725	8.8725	2.7000e-004	0.0000	8.8791
Total	**0.0116**	**0.2569**	**0.0908**	**7.9000e-004**	**0.0251**	**8.7000e-004**	**0.0260**	**6.8000e-003**	**8.4000e-004**	**7.6300e-003**	**0.0000**	**77.6293**	**77.6293**	**6.4600e-003**	**0.0000**	**77.7908**

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					0.0879	0.0000	0.0879	0.0133	0.0000	0.0133	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2534	2.5399	1.6641	2.9700e-003		0.1269	0.1269		0.1180	0.1180	0.0000	260.0890	260.0890	0.0734	0.0000	261.9246
Total	**0.2534**	**2.5399**	**1.6641**	**2.9700e-003**	**0.0879**	**0.1269**	**0.2148**	**0.0133**	**0.1180**	**0.1313**	**0.0000**	**260.0890**	**260.0890**	**0.0734**	**0.0000**	**261.9246**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.1300e-003	0.2536	0.0581	6.9000e-004	0.0153	8.0000e-004	0.0161	4.1900e-003	7.7000e-004	4.9600e-003	0.0000	68.7568	68.7568	6.1900e-003	0.0000	68.9116
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5100e-003	3.3400e-003	0.0328	1.0000e-004	9.8200e-003	7.0000e-005	9.8900e-003	2.6100e-003	7.0000e-005	2.6700e-003	0.0000	8.8725	8.8725	2.7000e-004	0.0000	8.8791
Total	**0.0116**	**0.2569**	**0.0908**	**7.9000e-004**	**0.0251**	**8.7000e-004**	**0.0260**	**6.8000e-003**	**8.4000e-004**	**7.6300e-003**	**0.0000**	**77.6293**	**77.6293**	**6.4600e-003**	**0.0000**	**77.7908**

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					0.7678	0.0000	0.7678	0.4221	0.0000	0.4221	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1653	1.7211	0.8991	1.6200e-003		0.0869	0.0869		0.0799	0.0799	0.0000	142.1018	142.1018	0.0460	0.0000	143.2508
Total	**0.1653**	**1.7211**	**0.8991**	**1.6200e-003**	**0.7678**	**0.0869**	**0.8547**	**0.4221**	**0.0799**	**0.5020**	**0.0000**	**142.1018**	**142.1018**	**0.0460**	**0.0000**	**143.2508**

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	2.6600e-003	1.9000e-003	0.0191	6.0000e-005	6.1300e-003	4.0000e-005	6.1800e-003	1.6300e-003	4.0000e-005	1.6700e-003	0.0000	5.3590	5.3590	1.5000e-004	0.0000	5.3628
Total	**2.6600e-003**	**1.9000e-003**	**0.0191**	**6.0000e-005**	**6.1300e-003**	**4.0000e-005**	**6.1800e-003**	**1.6300e-003**	**4.0000e-005**	**1.6700e-003**	**0.0000**	**5.3590**	**5.3590**	**1.5000e-004**	**0.0000**	**5.3628**

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					0.3455	0.0000	0.3455	0.1899	0.0000	0.1899	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1653	1.7211	0.8991	1.6200e-003		0.0869	0.0869		0.0799	0.0799	0.0000	142.1016	142.1016	0.0460	0.0000	143.2506
Total	**0.1653**	**1.7211**	**0.8991**	**1.6200e-003**	**0.3455**	**0.0869**	**0.4324**	**0.1899**	**0.0799**	**0.2699**	**0.0000**	**142.1016**	**142.1016**	**0.0460**	**0.0000**	**143.2506**

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	2.6600e-003	1.9000e-003	0.0191	6.0000e-005	6.1300e-003	4.0000e-005	6.1800e-003	1.6300e-003	4.0000e-005	1.6700e-003	0.0000	5.3590	5.3590	1.5000e-004	0.0000	5.3628
Total	**2.6600e-003**	**1.9000e-003**	**0.0191**	**6.0000e-005**	**6.1300e-003**	**4.0000e-005**	**6.1800e-003**	**1.6300e-003**	**4.0000e-005**	**1.6700e-003**	**0.0000**	**5.3590**	**5.3590**	**1.5000e-004**	**0.0000**	**5.3628**

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					0.6592	0.0000	0.6592	0.2733	0.0000	0.2733	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3185	3.5264	2.3468	4.7100e-003		0.1509	0.1509		0.1388	0.1388	0.0000	414.1619	414.1619	0.1340	0.0000	417.5106

Total	**0.3185**	**3.5264**	**2.3468**	**4.7100e-003**	**0.6592**	**0.1509**	**0.8101**	**0.2733**	**0.1388**	**0.4121**	**0.0000**	**414.1619**	**414.1619**	**0.1340**	**0.0000**	**417.5106**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.7500e-003	0.1998	0.0493	5.9000e-004	0.0131	6.0000e-004	0.0137	3.6000e-003	5.8000e-004	4.1700e-003	0.0000	58.2640	58.2640	5.2600e-003	0.0000	58.3955
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	5.2800e-003	3.7700e-003	0.0380	1.2000e-004	0.0122	9.0000e-005	0.0123	3.2400e-003	8.0000e-005	3.3200e-003	0.0000	10.6479	10.6479	3.1000e-004	0.0000	10.6556
Total	**0.0110**	**0.2036**	**0.0873**	**7.1000e-004**	**0.0253**	**6.9000e-004**	**0.0260**	**6.8400e-003**	**6.6000e-004**	**7.4900e-003**	**0.0000**	**68.9120**	**68.9120**	**5.5700e-003**	**0.0000**	**69.0511**

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					0.2966	0.0000	0.2966	0.1230	0.0000	0.1230	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3185	3.5264	2.3468	4.7100e-003		0.1509	0.1509		0.1388	0.1388	0.0000	414.1614	414.1614	0.1340	0.0000	417.5101
Total	**0.3185**	**3.5264**	**2.3468**	**4.7100e-003**	**0.2966**	**0.1509**	**0.4475**	**0.1230**	**0.1388**	**0.2618**	**0.0000**	**414.1614**	**414.1614**	**0.1340**	**0.0000**	**417.5101**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.7500e-003	0.1998	0.0493	5.9000e-004	0.0131	6.0000e-004	0.0137	3.6000e-003	5.8000e-004	4.1700e-003	0.0000	58.2640	58.2640	5.2600e-003	0.0000	58.3955
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	5.2800e-003	3.7700e-003	0.0380	1.2000e-004	0.0122	9.0000e-005	0.0123	3.2400e-003	8.0000e-005	3.3200e-003	0.0000	10.6479	10.6479	3.1000e-004	0.0000	10.6556
Total	**0.0110**	**0.2036**	**0.0873**	**7.1000e-004**	**0.0253**	**6.9000e-004**	**0.0260**	**6.8400e-003**	**6.6000e-004**	**7.4900e-003**	**0.0000**	**68.9120**	**68.9120**	**5.5700e-003**	**0.0000**	**69.0511**

3.5 Paving 1 - Internal road 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	0.0151	0.1550	0.1758	2.7000e-004		8.1300e-003	8.1300e-003		7.4800e-003	7.4800e-003	0.0000	24.0282	24.0282	7.7700e-003	0.0000	24.2225
Paving	3.3900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0185**	**0.1550**	**0.1758**	**2.7000e-004**		**8.1300e-003**	**8.1300e-003**		**7.4800e-003**	**7.4800e-003**	**0.0000**	**24.0282**	**24.0282**	**7.7700e-003**	**0.0000**	**24.2225**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	4.8000e-004	4.8000e-003	1.0000e-005	1.5400e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.3450	1.3450	4.0000e-005	0.0000	1.3460
Total	**6.7000e-004**	**4.8000e-004**	**4.8000e-003**	**1.0000e-005**	**1.5400e-003**	**1.0000e-005**	**1.5500e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.3450**	**1.3450**	**4.0000e-005**	**0.0000**	**1.3460**

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	0.0151	0.1550	0.1758	2.7000e-004		8.1300e-003	8.1300e-003		7.4800e-003	7.4800e-003	0.0000	24.0282	24.0282	7.7700e-003	0.0000	24.2224
Paving	3.3900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0185**	**0.1550**	**0.1758**	**2.7000e-004**		**8.1300e-003**	**8.1300e-003**		**7.4800e-003**	**7.4800e-003**	**0.0000**	**24.0282**	**24.0282**	**7.7700e-003**	**0.0000**	**24.2224**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	4.8000e-004	4.8000e-003	1.0000e-005	1.5400e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.3450	1.3450	4.0000e-005	0.0000	1.3460
Total	**6.7000e-004**	**4.8000e-004**	**4.8000e-003**	**1.0000e-005**	**1.5400e-003**	**1.0000e-005**	**1.5500e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.3450**	**1.3450**	**4.0000e-005**	**0.0000**	**1.3460**

3.5 Paving 1 - Internal road 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	0.0226	0.2281	0.2989	4.7000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	41.0565	41.0565	0.0133	0.0000	41.3885
Paving	5.7800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0284**	**0.2281**	**0.2989**	**4.7000e-004**		**0.0116**	**0.0116**		**0.0107**	**0.0107**	**0.0000**	**41.0565**	**41.0565**	**0.0133**	**0.0000**	**41.3885**

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	1.0800e-003	7.4000e-004	7.6100e-003	2.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.2135	2.2135	6.0000e-005	0.0000	2.2150
Total	**1.0800e-003**	**7.4000e-004**	**7.6100e-003**	**2.0000e-005**	**2.6300e-003**	**2.0000e-005**	**2.6500e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.2135**	**2.2135**	**6.0000e-005**	**0.0000**	**2.2150**

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	0.0226	0.2281	0.2989	4.7000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	41.0564	41.0564	0.0133	0.0000	41.3884
Paving	5.7800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0284**	**0.2281**	**0.2989**	**4.7000e-004**		**0.0116**	**0.0116**		**0.0107**	**0.0107**	**0.0000**	**41.0564**	**41.0564**	**0.0133**	**0.0000**	**41.3884**

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	1.0800e-003	7.4000e-004	7.6100e-003	2.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.2135	2.2135	6.0000e-005	0.0000	2.2150
Total	**1.0800e-003**	**7.4000e-004**	**7.6100e-003**	**2.0000e-005**	**2.6300e-003**	**2.0000e-005**	**2.6500e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.2135**	**2.2135**	**6.0000e-005**	**0.0000**	**2.2150**

3.6 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	0.2039	1.8661	1.9554	3.2200e-003		0.0967	0.0967		0.0910	0.0910	0.0000	276.9117	276.9117	0.0663	0.0000	278.5702

Total	**0.2039**	**1.8661**	**1.9554**	**3.2200e-003**		**0.0967**	**0.0967**		**0.0910**	**0.0910**	**0.0000**	**276.9117**	**276.9117**	**0.0663**	**0.0000**	**278.5702**

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	0.0399	1.3453	0.3597	3.6700e-003	0.0920	2.6000e-003	0.0946	0.0266	2.4800e-003	0.0291	0.0000	358.9762	358.9762	0.0261	0.0000	359.6276
Worker	0.2068	0.1421	1.4579	4.6900e-003	0.5041	3.4900e-003	0.5076	0.1339	3.2100e-003	0.1372	0.0000	424.1861	424.1861	0.0116	0.0000	424.4751
Total	**0.2466**	**1.4874**	**1.8176**	**8.3600e-003**	**0.5961**	**6.0900e-003**	**0.6022**	**0.1605**	**5.6900e-003**	**0.1662**	**0.0000**	**783.1622**	**783.1622**	**0.0376**	**0.0000**	**784.1026**

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	0.2039	1.8661	1.9554	3.2200e-003		0.0967	0.0967		0.0910	0.0910	0.0000	276.9113	276.9113	0.0663	0.0000	278.5698
Total	**0.2039**	**1.8661**	**1.9554**	**3.2200e-003**		**0.0967**	**0.0967**		**0.0910**	**0.0910**	**0.0000**	**276.9113**	**276.9113**	**0.0663**	**0.0000**	**278.5698**

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	0.0399	1.3453	0.3597	3.6700e-003	0.0920	2.6000e-003	0.0946	0.0266	2.4800e-003	0.0291	0.0000	358.9762	358.9762	0.0261	0.0000	359.6276
Worker	0.2068	0.1421	1.4579	4.6900e-003	0.5041	3.4900e-003	0.5076	0.1339	3.2100e-003	0.1372	0.0000	424.1861	424.1861	0.0116	0.0000	424.4751
Total	**0.2466**	**1.4874**	**1.8176**	**8.3600e-003**	**0.5961**	**6.0900e-003**	**0.6022**	**0.1605**	**5.6900e-003**	**0.1662**	**0.0000**	**783.1622**	**783.1622**	**0.0376**	**0.0000**	**784.1026**

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

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	0.0335	1.1497	0.3563	3.8900e-003	0.1001	1.3800e-003	0.1015	0.0289	1.3200e-003	0.0302	0.0000	380.6872	380.6872	0.0259	0.0000	381.3343
Worker	0.2132	0.1412	1.4709	4.9100e-003	0.5484	3.7200e-003	0.5521	0.1457	3.4300e-003	0.1491	0.0000	443.8309	443.8309	0.0115	0.0000	444.1184
Total	**0.2467**	**1.2908**	**1.8272**	**8.8000e-003**	**0.6484**	**5.1000e-003**	**0.6535**	**0.1746**	**4.7500e-003**	**0.1794**	**0.0000**	**824.5181**	**824.5181**	**0.0374**	**0.0000**	**825.4527**

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	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

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	0.0335	1.1497	0.3563	3.8900e-003	0.1001	1.3800e-003	0.1015	0.0289	1.3200e-003	0.0302	0.0000	380.6872	380.6872	0.0259	0.0000	381.3343
Worker	0.2132	0.1412	1.4709	4.9100e-003	0.5484	3.7200e-003	0.5521	0.1457	3.4300e-003	0.1491	0.0000	443.8309	443.8309	0.0115	0.0000	444.1184
Total	**0.2467**	**1.2908**	**1.8272**	**8.8000e-003**	**0.6484**	**5.1000e-003**	**0.6535**	**0.1746**	**4.7500e-003**	**0.1794**	**0.0000**	**824.5181**	**824.5181**	**0.0374**	**0.0000**	**825.4527**

3.6 Building Construction - 2024

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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

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	0.0325	1.1422	0.3477	3.8900e-003	0.1009	1.3500e-003	0.1022	0.0291	1.2900e-003	0.0304	0.0000	381.1773	381.1773	0.0258	0.0000	381.8214
Worker	0.2043	0.1305	1.3842	4.7500e-003	0.5526	3.6800e-003	0.5563	0.1468	3.3900e-003	0.1502	0.0000	429.6376	429.6376	0.0106	0.0000	429.9037
Total	**0.2368**	**1.2727**	**1.7319**	**8.6400e-003**	**0.6534**	**5.0300e-003**	**0.6585**	**0.1760**	**4.6800e-003**	**0.1806**	**0.0000**	**810.8149**	**810.8149**	**0.0364**	**0.0000**	**811.7251**

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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

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	0.0325	1.1422	0.3477	3.8900e-003	0.1009	1.3500e-003	0.1022	0.0291	1.2900e-003	0.0304	0.0000	381.1773	381.1773	0.0258	0.0000	381.8214
Worker	0.2043	0.1305	1.3842	4.7500e-003	0.5526	3.6800e-003	0.5563	0.1468	3.3900e-003	0.1502	0.0000	429.6376	429.6376	0.0106	0.0000	429.9037
Total	**0.2368**	**1.2727**	**1.7319**	**8.6400e-003**	**0.6534**	**5.0300e-003**	**0.6585**	**0.1760**	**4.6800e-003**	**0.1806**	**0.0000**	**810.8149**	**810.8149**	**0.0364**	**0.0000**	**811.7251**

3.6 Building Construction - 2025

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335

Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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	0.0314	1.1213	0.3393	3.8400e-003	0.1005	1.3100e-003	0.1018	0.0290	1.2500e-003	0.0303	0.0000	377.4124	377.4124	0.0254	0.0000	378.0472
Worker	0.1944	0.1198	1.2870	4.5400e-003	0.5505	3.6100e-003	0.5541	0.1463	3.3200e-003	0.1496	0.0000	410.6954	410.6954	9.7900e-003	0.0000	410.9401
Total	**0.2258**	**1.2411**	**1.6264**	**8.3800e-003**	**0.6509**	**4.9200e-003**	**0.6559**	**0.1753**	**4.5700e-003**	**0.1799**	**0.0000**	**788.1078**	**788.1078**	**0.0352**	**0.0000**	**788.9873**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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	0.0314	1.1213	0.3393	3.8400e-003	0.1005	1.3100e-003	0.1018	0.0290	1.2500e-003	0.0303	0.0000	377.4124	377.4124	0.0254	0.0000	378.0472
Worker	0.1944	0.1198	1.2870	4.5400e-003	0.5505	3.6100e-003	0.5541	0.1463	3.3200e-003	0.1496	0.0000	410.6954	410.6954	9.7900e-003	0.0000	410.9401
Total	**0.2258**	**1.2411**	**1.6264**	**8.3800e-003**	**0.6509**	**4.9200e-003**	**0.6559**	**0.1753**	**4.5700e-003**	**0.1799**	**0.0000**	**788.1078**	**788.1078**	**0.0352**	**0.0000**	**788.9873**

3.6 Building Construction - 2026

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	0.0732	0.6671	0.8605	1.4400e-003		0.0282	0.0282		0.0266	0.0266	0.0000	124.0769	124.0769	0.0292	0.0000	124.8061
Total	**0.0732**	**0.6671**	**0.8605**	**1.4400e-003**		**0.0282**	**0.0282**		**0.0266**	**0.0266**	**0.0000**	**124.0769**	**124.0769**	**0.0292**	**0.0000**	**124.8061**

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	0.0126	0.4531	0.1371	1.5600e-003	0.0412	5.2000e-004	0.0417	0.0119	5.0000e-004	0.0124	0.0000	153.8389	153.8389	0.0103	0.0000	154.0965
Worker	0.0764	0.0457	0.4958	1.7900e-003	0.2257	1.4300e-003	0.2271	0.0600	1.3200e-003	0.0613	0.0000	162.2032	162.2032	3.7400e-003	0.0000	162.2967
Total	**0.0890**	**0.4988**	**0.6330**	**3.3500e-003**	**0.2669**	**1.9500e-003**	**0.2688**	**0.0719**	**1.8200e-003**	**0.0737**	**0.0000**	**316.0422**	**316.0422**	**0.0140**	**0.0000**	**316.3932**

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	0.0732	0.6671	0.8605	1.4400e-003		0.0282	0.0282		0.0266	0.0266	0.0000	124.0768	124.0768	0.0292	0.0000	124.8059
Total	**0.0732**	**0.6671**	**0.8605**	**1.4400e-003**		**0.0282**	**0.0282**		**0.0266**	**0.0266**	**0.0000**	**124.0768**	**124.0768**	**0.0292**	**0.0000**	**124.8059**

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	0.0126	0.4531	0.1371	1.5600e-003	0.0412	5.2000e-004	0.0417	0.0119	5.0000e-004	0.0124	0.0000	153.8389	153.8389	0.0103	0.0000	154.0965
Worker	0.0764	0.0457	0.4958	1.7900e-003	0.2257	1.4300e-003	0.2271	0.0600	1.3200e-003	0.0613	0.0000	162.2032	162.2032	3.7400e-003	0.0000	162.2967
Total	**0.0890**	**0.4988**	**0.6330**	**3.3500e-003**	**0.2669**	**1.9500e-003**	**0.2688**	**0.0719**	**1.8200e-003**	**0.0737**	**0.0000**	**316.0422**	**316.0422**	**0.0140**	**0.0000**	**316.3932**

3.7 Paving 2 - paved areas - 2025

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	0.0288	0.2703	0.4592	7.2000e-004		0.0132	0.0132		0.0121	0.0121	0.0000	63.0607	63.0607	0.0204	0.0000	63.5705
Paving	9.1700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0380**	**0.2703**	**0.4592**	**7.2000e-004**		**0.0132**	**0.0132**		**0.0121**	**0.0121**	**0.0000**	**63.0607**	**63.0607**	**0.0204**	**0.0000**	**63.5705**

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	1.4300e-003	8.8000e-004	9.4500e-003	3.0000e-005	4.0400e-003	3.0000e-005	4.0700e-003	1.0700e-003	2.0000e-005	1.1000e-003	0.0000	3.0155	3.0155	7.0000e-005	0.0000	3.0173
Total	**1.4300e-003**	**8.8000e-004**	**9.4500e-003**	**3.0000e-005**	**4.0400e-003**	**3.0000e-005**	**4.0700e-003**	**1.0700e-003**	**2.0000e-005**	**1.1000e-003**	**0.0000**	**3.0155**	**3.0155**	**7.0000e-005**	**0.0000**	**3.0173**

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	0.0288	0.2703	0.4592	7.2000e-004		0.0132	0.0132		0.0121	0.0121	0.0000	63.0606	63.0606	0.0204	0.0000	63.5705
Paving	9.1700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0380**	**0.2703**	**0.4592**	**7.2000e-004**		**0.0132**	**0.0132**		**0.0121**	**0.0121**	**0.0000**	**63.0606**	**63.0606**	**0.0204**	**0.0000**	**63.5705**

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	1.4300e-003	8.8000e-004	9.4500e-003	3.0000e-005	4.0400e-003	3.0000e-005	4.0700e-003	1.0700e-003	2.0000e-005	1.1000e-003	0.0000	3.0155	3.0155	7.0000e-005	0.0000	3.0173
Total	**1.4300e-003**	**8.8000e-004**	**9.4500e-003**	**3.0000e-005**	**4.0400e-003**	**3.0000e-005**	**4.0700e-003**	**1.0700e-003**	**2.0000e-005**	**1.1000e-003**	**0.0000**	**3.0155**	**3.0155**	**7.0000e-005**	**0.0000**	**3.0173**

3.8 Architectural Coating - 2026

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	2.1370					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	7.5200e-003	0.0504	0.0796	1.3000e-004		2.2700e-003	2.2700e-003		2.2700e-003	2.2700e-003	0.0000	11.2343	11.2343	6.1000e-004	0.0000	11.2496
Total	**2.1445**	**0.0504**	**0.0796**	**1.3000e-004**		**2.2700e-003**	**2.2700e-003**		**2.2700e-003**	**2.2700e-003**	**0.0000**	**11.2343**	**11.2343**	**6.1000e-004**	**0.0000**	**11.2496**

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	7.5700e-003	0.0822	3.0000e-004	0.0374	2.4000e-004	0.0376	9.9400e-003	2.2000e-004	0.0102	0.0000	26.8831	26.8831	6.2000e-004	0.0000	26.8985
Total	**0.0127**	**7.5700e-003**	**0.0822**	**3.0000e-004**	**0.0374**	**2.4000e-004**	**0.0376**	**9.9400e-003**	**2.2000e-004**	**0.0102**	**0.0000**	**26.8831**	**26.8831**	**6.2000e-004**	**0.0000**	**26.8985**

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	2.1370					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5200e-003	0.0504	0.0796	1.3000e-004		2.2700e-003	2.2700e-003		2.2700e-003	2.2700e-003	0.0000	11.2343	11.2343	6.1000e-004	0.0000	11.2496
Total	**2.1445**	**0.0504**	**0.0796**	**1.3000e-004**		**2.2700e-003**	**2.2700e-003**		**2.2700e-003**	**2.2700e-003**	**0.0000**	**11.2343**	**11.2343**	**6.1000e-004**	**0.0000**	**11.2496**

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	7.5700e-003	0.0822	3.0000e-004	0.0374	2.4000e-004	0.0376	9.9400e-003	2.2000e-004	0.0102	0.0000	26.8831	26.8831	6.2000e-004	0.0000	26.8985
Total	**0.0127**	**7.5700e-003**	**0.0822**	**3.0000e-004**	**0.0374**	**2.4000e-004**	**0.0376**	**9.9400e-003**	**2.2000e-004**	**0.0102**	**0.0000**	**26.8831**	**26.8831**	**6.2000e-004**	**0.0000**	**26.8985**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9284	3.7849	10.7797	0.0402	3.9341	0.0318	3.9659	1.0533	0.0295	1.0828	0.0000	3,723.9067	3,723.9067	0.1855	0.0000	3,728.5431
Unmitigated	0.9284	3.7849	10.7797	0.0402	3.9341	0.0318	3.9659	1.0533	0.0295	1.0828	0.0000	3,723.9067	3,723.9067	0.1855	0.0000	3,728.5431

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Apartments Mid Rise	1,548.00	1,612.50	1362.24	4,370,548	4,370,548
Condo/Townhouse High Rise	1,296.00	1,334.88	1035.18	3,609,944	3,609,944
General Office Building	60.00	13.38	5.70	108,932	108,932
Health Club	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	480.00	283.08	216.48	491,337	491,337
Retirement Community	360.00	562.50	475.20	1,157,499	1,157,499
Strip Mall	520.00	360.44	239.20	703,936	703,936
Total	4,264.00	4,166.78	3,334.00	10,442,196	10,442,196

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Condo/Townhouse High Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Retirement Community	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.609162	0.038894	0.178600	0.101308	0.013823	0.005356	0.016956	0.024628	0.001928	0.001823	0.005807	0.000764	0.000950
Condo/Townhouse High Rise	0.609162	0.038894	0.178600	0.101308	0.013823	0.005356	0.016956	0.024628	0.001928	0.001823	0.005807	0.000764	0.000950
General Office Building	0.609162	0.038894	0.178600	0.101308	0.013823	0.005356	0.016956	0.024628	0.001928	0.001823	0.005807	0.000764	0.000950
Health Club	0.609162	0.038894	0.178600	0.101308	0.013823	0.005356	0.016956	0.024628	0.001928	0.001823	0.005807	0.000764	0.000950
Parking Lot	0.609162	0.038894	0.178600	0.101308	0.013823	0.005356	0.016956	0.024628	0.001928	0.001823	0.005807	0.000764	0.000950
Quality Restaurant	0.609162	0.038894	0.178600	0.101308	0.013823	0.005356	0.016956	0.024628	0.001928	0.001823	0.005807	0.000764	0.000950
Retirement Community	0.609162	0.038894	0.178600	0.101308	0.013823	0.005356	0.016956	0.024628	0.001928	0.001823	0.005807	0.000764	0.000950
Strip Mall	0.609162	0.038894	0.178600	0.101308	0.013823	0.005356	0.016956	0.024628	0.001928	0.001823	0.005807	0.000764	0.000950

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	718.8798	718.8798	0.0326	6.7300e-003	721.7006
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	718.8798	718.8798	0.0326	6.7300e-003	721.7006
NaturalGas Mitigated	0.0256	0.2205	0.1063	1.4000e-003		0.0177	0.0177		0.0177	0.0177	0.0000	253.2708	253.2708	4.8500e-003	4.6400e-003	254.7758
NaturalGas Unmitigated	0.0256	0.2205	0.1063	1.4000e-003		0.0177	0.0177		0.0177	0.0177	0.0000	253.2708	253.2708	4.8500e-003	4.6400e-003	254.7758

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.91661e+006	0.0103	0.0883	0.0376	5.6000e-004		7.1400e-003	7.1400e-003		7.1400e-003	7.1400e-003	0.0000	102.2779	102.2779	1.9600e-003	1.8800e-003	102.8857
Condo/Townhouse High Rise	1.20346e+006	6.4900e-003	0.0555	0.0236	3.5000e-004		4.4800e-003	4.4800e-003		4.4800e-003	4.4800e-003	0.0000	64.2210	64.2210	1.2300e-003	1.1800e-003	64.6026
General Office Building	60570	3.3000e-004	2.9700e-003	2.4900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2323	3.2323	6.0000e-005	6.0000e-005	3.2515
Health Club	23120	1.2000e-004	1.1300e-003	9.5000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2338	1.2338	2.0000e-005	2.0000e-005	1.2411
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
Quality Restaurant	523140	2.8200e-003	0.0256	0.0215	1.5000e-004		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	27.9167	27.9167	5.4000e-004	5.1000e-004	28.0826

Retirement Community	1.01029e+006	5.4500e-003	0.0466	0.0198	3.0000e-004		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	53.9131	53.9131	1.0300e-003	9.9000e-004	54.2335
Strip Mall	8920	5.0000e-005	4.4000e-004	3.7000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4760	0.4760	1.0000e-005	1.0000e-005	0.4788
Total		**0.0256**	**0.2205**	**0.1063**	**1.3900e-003**		**0.0177**	**0.0177**		**0.0177**	**0.0177**	**0.0000**	**253.2708**	**253.2708**	**4.8500e-003**	**4.6500e-003**	**254.7758**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.91661e+006	0.0103	0.0883	0.0376	5.6000e-004		7.1400e-003	7.1400e-003		7.1400e-003	7.1400e-003	0.0000	102.2779	102.2779	1.9600e-003	1.8800e-003	102.8857
Condo/Townhouse High Rise	1.20346e+006	6.4900e-003	0.0555	0.0236	3.5000e-004		4.4800e-003	4.4800e-003		4.4800e-003	4.4800e-003	0.0000	64.2210	64.2210	1.2300e-003	1.1800e-003	64.6026
General Office Building	60570	3.3000e-004	2.9700e-003	2.4900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2323	3.2323	6.0000e-005	6.0000e-005	3.2515
Health Club	23120	1.2000e-004	1.1300e-003	9.5000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2338	1.2338	2.0000e-005	2.0000e-005	1.2411
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
Quality Restaurant	523140	2.8200e-003	0.0256	0.0215	1.5000e-004		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	27.9167	27.9167	5.4000e-004	5.1000e-004	28.0826
Retirement Community	1.01029e+006	5.4500e-003	0.0466	0.0198	3.0000e-004		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	53.9131	53.9131	1.0300e-003	9.9000e-004	54.2335
Strip Mall	8920	5.0000e-005	4.4000e-004	3.7000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4760	0.4760	1.0000e-005	1.0000e-005	0.4788
Total		**0.0256**	**0.2205**	**0.1063**	**1.3900e-003**		**0.0177**	**0.0177**		**0.0177**	**0.0177**	**0.0000**	**253.2708**	**253.2708**	**4.8500e-003**	**4.6500e-003**	**254.7758**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.03327e+006	300.1642	0.0136	2.8100e-003	301.3420
Condo/Townhouse High Rise	690864	200.6950	9.0900e-003	1.8800e-003	201.4825
General Office Building	40320	11.7129	5.3000e-004	1.1000e-004	11.7589
Health Club	16620	4.8281	2.2000e-004	5.0000e-005	4.8470
Parking Lot	128100	37.2129	1.6900e-003	3.5000e-004	37.3589
Quality Restaurant	116100	33.7269	1.5300e-003	3.2000e-004	33.8592
Retirement Community	399125	115.9452	5.2500e-003	1.0900e-003	116.4002
Strip Mall	50240	14.5947	6.6000e-004	1.4000e-004	14.6519
Total		**718.8798**	**0.0326**	**6.7500e-003**	**721.7006**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.03327e+006	300.1642	0.0136	2.8100e-003	301.3420
Condo/Townhouse High Rise	690864	200.6950	9.0900e-003	1.8800e-003	201.4825
General Office Building	40320	11.7129	5.3000e-004	1.1000e-004	11.7589
Health Club	16620	4.8281	2.2000e-004	5.0000e-005	4.8470
Parking Lot	128100	37.2129	1.6900e-003	3.5000e-004	37.3589
Quality Restaurant	116100	33.7269	1.5300e-003	3.2000e-004	33.8592
Retirement Community	399125	115.9452	5.2500e-003	1.0900e-003	116.4002

Strip Mall	50240	14.5947	6.6000e-004	1.4000e-004	14.6519
Total		**718.8798**	**0.0326**	**6.7500e-003**	**721.7006**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.3681	0.3114	8.5924	0.0168		0.8063	0.8063		0.8063	0.8063	103.0894	227.1380	330.2275	0.4921	4.0500e-003	343.7376
Unmitigated	3.3681	0.3114	8.5924	0.0168		0.8063	0.8063		0.8063	0.8063	103.0894	227.1380	330.2275	0.4921	4.0500e-003	343.7376

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	0.7744					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9374					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.5420	0.2678	4.8006	0.0166		0.7853	0.7853		0.7853	0.7853	103.0894	220.9358	324.0252	0.4862	4.0500e-003	337.3862

Landscaping	0.1144	0.0437	3.7917	2.0000e-004		0.0210	0.0210		0.0210	0.0210	0.0000	6.2023	6.2023	5.9700e-003	0.0000	6.3514
Total	**3.3681**	**0.3114**	**8.5924**	**0.0168**		**0.8063**	**0.8063**		**0.8063**	**0.8063**	**103.0894**	**227.1380**	**330.2275**	**0.4921**	**4.0500e-003**	**343.7376**

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	0.7744					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9374					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.5420	0.2678	4.8006	0.0166		0.7853	0.7853		0.7853	0.7853	103.0894	220.9358	324.0252	0.4862	4.0500e-003	337.3862
Landscaping	0.1144	0.0437	3.7917	2.0000e-004		0.0210	0.0210		0.0210	0.0210	0.0000	6.2023	6.2023	5.9700e-003	0.0000	6.3514
Total	**3.3681**	**0.3114**	**8.5924**	**0.0168**		**0.8063**	**0.8063**		**0.8063**	**0.8063**	**103.0894**	**227.1380**	**330.2275**	**0.4921**	**4.0500e-003**	**343.7376**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	213.5229	1.1525	0.0289	250.9446
Unmitigated	213.5229	1.1525	0.0289	250.9446

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	16.8097 / 10.5974	103.1198	0.5522	0.0139	121.0513
Condo/Townhouse High Rise	10.555 / 6.65421	64.7497	0.3467	8.7000e-003	76.0090
General Office Building	0.533201 / 0.326801	3.2408	0.0175	4.4000e-004	3.8094
Health Club	0.118286 / 0.0724981	0.7189	3.8900e-003	1.0000e-004	0.8451
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0.910601 / 0.0581235	3.9209	0.0298	7.3000e-004	4.8857
Retirement Community	5.86386 / 3.69678	35.9720	0.1926	4.8300e-003	42.2272
Strip Mall	0.29629 / 0.181597	1.8008	9.7300e-003	2.4000e-004	2.1168
Total		**213.5230**	**1.1525**	**0.0289**	**250.9446**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	16.8097 / 10.5974	103.1198	0.5522	0.0139	121.0513

Condo/Townhouse High Rise	10.555 / 6.65421	64.7497	0.3467	8.7000e-003	76.0090
General Office Building	0.533201 / 0.326801	3.2408	0.0175	4.4000e-004	3.8094
Health Club	0.118286 / 0.0724981	0.7189	3.8900e-003	1.0000e-004	0.8451
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0.910601 / 0.0581235	3.9209	0.0298	7.3000e-004	4.8857
Retirement Community	5.86386 / 3.69678	35.9720	0.1926	4.8300e-003	42.2272
Strip Mall	0.29629 / 0.181597	1.8008	9.7300e-003	2.4000e-004	2.1168
Total		**213.5230**	**1.1525**	**0.0289**	**250.9446**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.9777	0.7670	0.0000	32.1518
Unmitigated	51.9109	3.0679	0.0000	128.6070

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	118.68	24.0910	1.4237	0.0000	59.6844
Condo/Townhouse High Rise	74.52	15.1269	0.8940	0.0000	37.4762
General Office Building	2.79	0.5663	0.0335	0.0000	1.4031
Health Club	11.4	2.3141	0.1368	0.0000	5.7331
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	2.74	0.5562	0.0329	0.0000	1.3780
Retirement Community	41.4	8.4038	0.4967	0.0000	20.8201
Strip Mall	4.2	0.8526	0.0504	0.0000	2.1122
Total		**51.9109**	**3.0678**	**0.0000**	**128.6070**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	29.67	6.0227	0.3559	0.0000	14.9211
Condo/Townhouse High Rise	18.63	3.7817	0.2235	0.0000	9.3691
General Office Building	0.6975	0.1416	8.3700e-003	0.0000	0.3508
Health Club	2.85	0.5785	0.0342	0.0000	1.4333

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0.685	0.1391	8.2200e-003	0.0000	0.3445
Retirement Community	10.35	2.1010	0.1242	0.0000	5.2050
Strip Mall	1.05	0.2131	0.0126	0.0000	0.5281
Total		**12.9777**	**0.7670**	**0.0000**	**32.1518**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation