Air Quality Assessment
Jamacha Boulevard Office Building
Spring Valley, CA

Submitted To:

Eilar and Associates
210 S. Juniper Street, Suite 100
Escondido, CA 92025

Prepared By:

Scientific Resources Associated
1328 Kaimalino Lane
San Diego, CA 92109
(858) 488-2987

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Prepared By: _____

Valorie L. Thompson, Ph.D.
Principal

Finalized By:

Jeremy Louden, Principal
Ldn Consulting

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Glossary of Terms and Acronyms

APCD	Air Pollution Control District
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BACM	Best Available Control Measure
BACT	Best Available Control Technology
BMPs	Best Management Practices
CAA	Clean Air Act (Federal)
CAAQS	California Ambient Air Quality Standard
CALINE4	California Line Source Dispersion Model (Version 4)
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CO	Carbon Monoxide
DPLU	San Diego County Department of Planning and Land Use
H_2S	Hydrogen Sulfide
HARP	HotSpots Analysis and Reporting Program
HI	Hazard Index
ISCST	Industrial Source Complex Short Term Model
mg/m^3	Milligrams per Cubic Meter
$\mu g/m^3$	Micrograms per Cubic Meter
NAAQS	National Ambient Air Quality Standard
NOx	Oxides of Nitrogen
NO_2	Nitrogen Dioxide
O_3	Ozone
$PM_{2.5}$	Fine Particulate Matter (particulate matter with an aerodynamic diameter of 2.5 microns or less
PM_{10}	Respirable Particulate Matter (particulate matter with an aerodynamic diameter of 10 microns or less
ppm	Parts per million
PSD	Prevention of Significant Deterioration
RAQS	San Diego County Regional Air Quality Strategy
ROCs	Reactive Organic Compounds
ROG	Reactive Organic Gases
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SCAB	South Coast Air Basin
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SOx	Oxides of Sulfur
SO_2	Sulfur Dioxide
TACs	Toxic Air Contaminants
T-BACT	Toxics Best Available Control Technology
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

Executive Summary

This report presents an assessment of potential air quality impacts associated with the proposed Jamacha Boulevard Office Building project proposed for the Spring Valley community of the County of San Diego. The applicant proposes to construct a 12,000 square foot office building on an approximate 1.08-acre site on Jamacha Boulevard.

The project is consistent with the General Plan and zoning for the site, and is therefore consistent with the San Diego Regional Air Quality Strategy (RAQS) and State Implementation Plan (SIP).

To reduce the emissions to the extent feasible, fugitive dust control measures will be implemented during construction. Measures that are incorporated into the project description to reduce emissions associated with construction include the following:

- Application of water three times daily during grading on active grading sites
- Reduce speeds to 15 mph on unpaved roads
- Use architectural coatings that comply with SDAPCD Rule 67.0.1
- Use of a construction fleet that uses any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or ARB certified Tier III or IV equipment to reduce construction heavy equipment emission rates
- Coordinated construction schedules with cumulative projects to reduce simultaneous particulate emissions

These measures constitute best management practices for dust control, architectural coatings, diesel particulate, and construction equipment emissions.

The proposed project would result in emissions of air pollutants for both the construction phase and operational phase of the project. Construction emissions would include emissions associated with fugitive dust, heavy construction equipment and construction workers commuting to and from the site. Emissions of criteria pollutants during construction would be below the screening-level thresholds.

The main operational impacts associated with the Project would include impacts associated with traffic; with additional impacts associated with area sources such as energy use and landscaping. Emissions of all pollutants would be below the screening-level thresholds.

A health risk assessment was conducted to evaluate the potential for project construction or operations to result in a significant impact to nearby sensitive receptors. The risk assessment focused on diesel particulate matter, which is the main TAC emitted from vehicles. The risk assessment concluded that risks were less than significant.

An evaluation of odors indicated that odor impacts would be less than significant.

1.0 INTRODUCTION

1.1 Purpose of the Report

This report presents an assessment of potential air quality impacts associated with the proposed Jamacha Boulevard Office Building Project in the County of San Diego. The evaluation addresses the potential for air emissions during construction and after full buildout of the project, including an assessment of the potential for CO "hot spots" to form due to traffic associated with the proposed project.

1.2 Project Location and Description

The applicant proposes to construct a 12,000 square foot office building on an undeveloped site on Jamacha Boulevard in Spring Valley. The site is approximately 1.08 acres in size. The site will include 48 paved parking spaces, along with on-site landscaping including tree plantings. Figure 1 presents a schematic of the site.

This Air Quality Technical Report includes an evaluation of existing conditions in the project vicinity, an assessment of potential impacts associated with project construction, and an evaluation of project operational impacts.

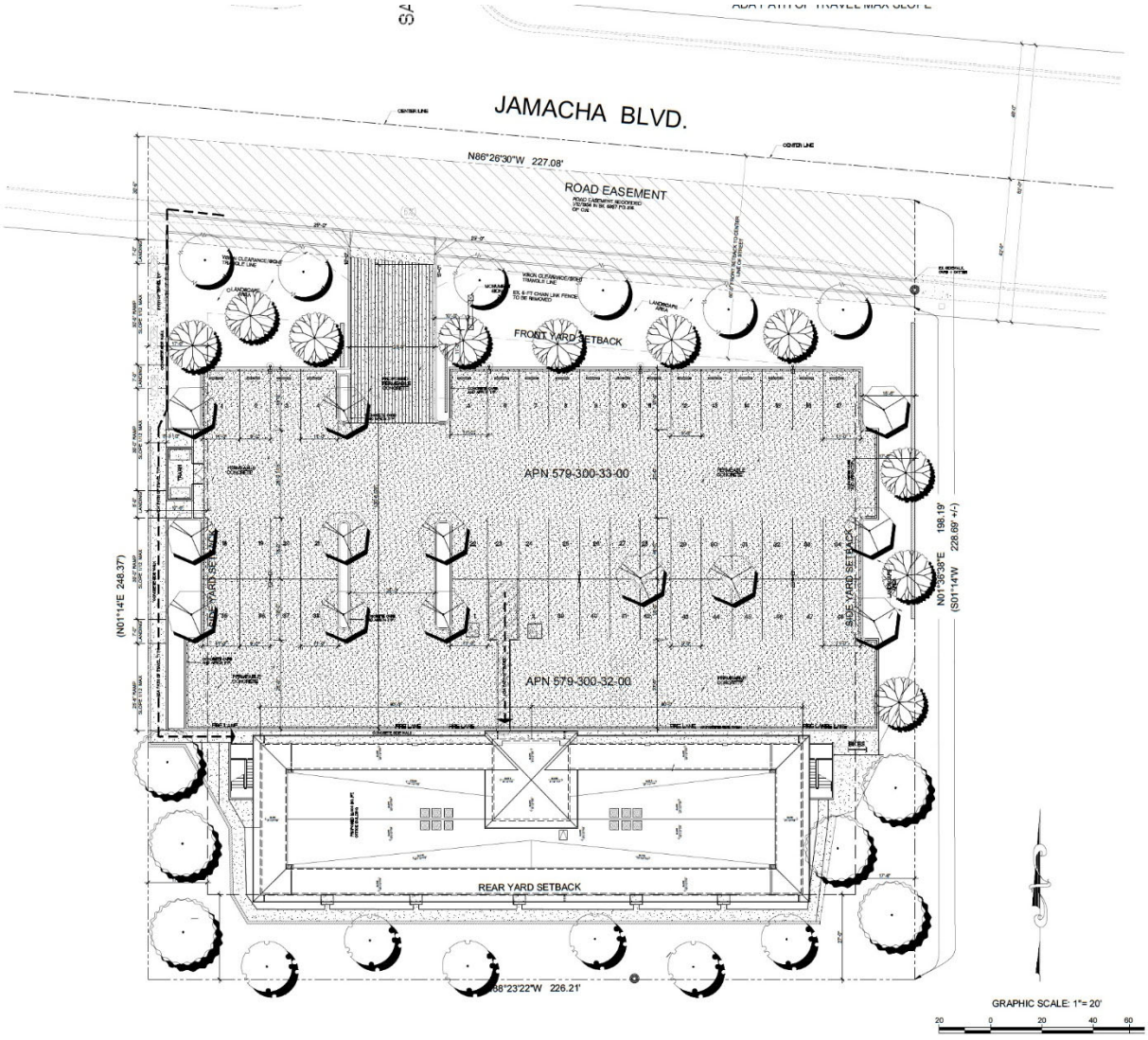

Figure 1. Jamacha Boulevard Office Building

2.0 EXISTING CONDITIONS

2.1 Existing Setting

The project site is located in the Spring Valley Community of unincorporated San Diego County. The site is currently vacant. The site is surrounded by residential dwellings to the north, south, and east; and the Jehovah's Witness Church directly to the west of the site. These uses are considered to be sensitive receptors. The closest residence is approximately 65 feet to the south of the site. The Jehovah's Witness Church is approximately 140 feet to the west, with the parking lot located adjacent to the site. The site's southwest corner is adjacent to the La Presa Elementary School. The site is relatively flat.

2.2 Climate and Meteorology

The project area, like the rest of San Diego County's inland valley areas, has a Mediterranean climate characterized by warm, dry summers and mild, wet winters.

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to transport pollutants from the coastal areas toward the inland areas. Data collected by the San Diego County Air Pollution Control District (SDAPCD) indicate that pollutant levels are often lower at the coast and higher inland as pollutants become trapped by the local mountains. Pollutants may be trapped by periodic temperature inversions. A temperature inversion is a thin layer of the atmosphere where the decrease in temperature with elevation is less than normal. The inversion does not allow pollutants to be transported, but traps pollutants resulting in increased concentrations. Generally, the morning inversion layer is lower than the afternoon inversion layer; therefore, pollutant concentrations tend to be higher in the afternoon. (NOAA 2004).

The SDAPCD measures meteorological data in locations where it operates a monitoring station. There is no monitoring station that measures micro-scale meteorology in the Spring Valley area. The nearest monitoring station to the site is the El Cajon monitoring station.

The project site is located in the San Diego Air Basin (SDAB). The climate of the SDAB is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. Figure 2 provides a graphic representation of the prevailing winds in the project vicinity, as measured at the SDAPCD's El Cajon Monitoring Station (the closest meteorological monitoring station to the site). The high pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone, commonly known as smog.

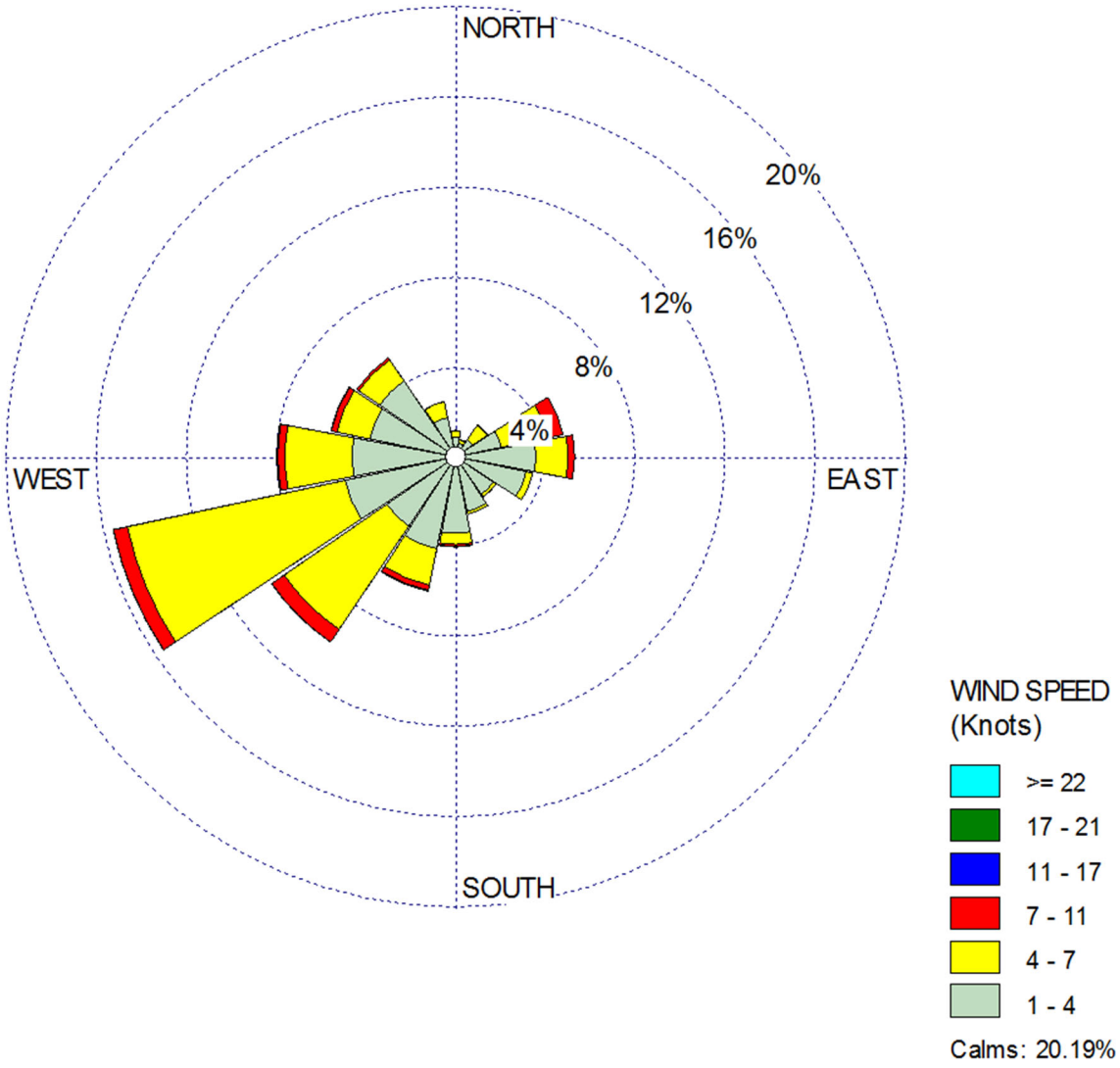

Figure 2. Wind Rose – El Cajon Monitoring Station

2.3 Regulatory Setting

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act

(CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called "criteria" pollutants). The criteria pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), sulfur dioxide (SO_2), and lead. Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Air Resources Board (ARB) has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. On April 15, 2004, the SDAB was designated a basic nonattainment area for the 8-hour NAAQS for O_3. The SDAB is in attainment for the NAAQS for all other criteria pollutants. The SDAB is currently classified as a nonattainment area under the CAAQS for O_3, particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), and particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}).

The following specific descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on USEPA (2007) and ARB (2001).

Ozone. O_3 is considered a photochemical oxidant, which is a chemical that is formed when volatile organic compounds (VOCs) and oxides of nitrogen (NOx), both by-products of combustion, react in the presence of ultraviolet light. O_3 is considered a respiratory irritant and prolonged exposure

can reduce lung function, aggravate asthma and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to O_3.

Carbon Monoxide. CO is a product of combustion, and the main source of CO in the SDAB is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and can also affect mental alertness and vision.

Nitrogen Dioxide. NO_2 is also a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitrogen oxide (NO) with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter. Respirable particulate matter, or PM_{10}, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or $PM_{2.5}$, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in this size range has been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, combustion, tire and brake wear, construction operations and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs.

Sulfur dioxide. SO_2 is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Pb in the atmosphere occurs as particulate matter. Pb has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Pb has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Pb is also classified as a probable human carcinogen.

Sulfates. Sulfates are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The ARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide. H_2S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the standard would result in exposure to a very disagreeable odor. In 1984, a ARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride. Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer

is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer, in humans.

The ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The ARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The ARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, 2009, 2016 and most recently in 2022. The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The SDAPCD has also developed the air basin's input to the SIP, which is required under the Federal Clean Air Act for areas that are out of attainment of air quality standards. The SIP includes the SDAPCD's plans and control measures for attaining the O_3 NAAQS. The SIP is also updated on a triennial basis. The latest SIP update was submitted by the ARB to the USEPA in 2007, and was approved in 2012. The latest revisions to the SIP were submitted in 2011. The SDAPCD has developed its *Eight-Hour Ozone Attainment Plan for San Diego County* (SDAPCD 2007), which provides plans for attaining and maintaining the 8-hour NAAQS for ozone.

The RAQS relies on information from ARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future

emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the County's General Plan. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the general plan and SANDAG's growth projections, the project might be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

The 2022 update mostly summarizes how the 2016 update has lowered NOX and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NOX reduction measures. NOX and VOCs are precursors to the formation of ozone in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status for criteria pollutants with respect to both federal and state nonattainment status by pollutants for County is shown in Table 2.2 on the following page (SDAPCD, 2023).

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the SDAPCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for O_3.

On April 30, 2020, the National Highway Transportation Safety Administration (NHTSA) and the USEPA published the Safer Affordable Fuel-Efficient (SAFE) Vehicle Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (USEPA 2020). The SAFE Rule revised the Corporate Average Fuel Economy (CAFE) standards and set vehicle model year standards beyond

2025 at 2025 levels. Both the SAFE Rule and CAFE standards set forth vehicle fuel efficiency requirements and greenhouse gas emission standards. The SAFE Rule adopted less stringent fuel efficiency standards than previously adopted.

It should be noted that despite the federal regulatory agencies' relaxation of vehicle standards, the state of California is proceeding with additional measures to reduce greenhouse gas emissions from vehicles, such as the State's achievement of increased penetration of zero emission vehicles under Executive Order N-79-20 and the ARB draft update to its Mobile Source Strategy (regulatory compliance measure). While the Executive Order is mainly directed at reductions in greenhouse gases, the order and the Mobile Source Strategy will also result in substantial reductions in criteria pollutant emissions through the replacement of petroleum-fueled vehicles with zero emission vehicles. Due to the competing emission rates from the mentioned legislation, no off-model adjustments were made outside of CalEEMod default assumptions. The SAFE Rule adjustment factors were not included in the CalEEMod analysis.

Table 1 presents a summary of the ambient air quality standards adopted by the federal and California Clean Air Acts.

Table 1 Ambient Air Quality Standards						
POLLUTANT	**AVE. TIME**	**CALIFORNIA STANDARDS**		**NATIONAL STANDARDS**		
		Concentration	**Measurement Method**	**Primary**	**Secondary**	**Measurement Method**
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	--	--	Ultraviolet Photometry
	8 hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm (57 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m^3)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (339 µg/m^3)		0.100 ppm (188 µg/m^3)	--	
Sulfur Dioxide (SO_2)	24 hours	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence	--	--	Pararosaniline
	3 hours	--		--	0.5 ppm (1300 µg/m^3)	
	1 hour	0.25 ppm (655 µg/m^3)		0.075 ppm (196 µg/m^3)	--	
Respirable Particulate Matter (PM_{10})	24 hours	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	150 µg/m^3	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		--	--	
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 µg/m^3	35 µg/m^3	
Sulfates	24 hours	25 µg/m^3	Ion Chromatography	--	--	--
Lead (Pb)	30-day Average	1.5 µg/m^3	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 µg/m^3	1.5 µg/m^3	
	3-month Rolling Average	--		0.15 µg/m^3	0.15 µg/m^3	
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 µg/m^3)	Gas Chromatography	--	--	--

ppm= parts per million
µg/m^3 = micrograms per cubic meter
mg/m^3= milligrams per cubic meter
Source: California Air Resources Board 2019, www.arb.ca.gov

2.4 Background Air Quality

The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring station to the project site is the El Cajon monitoring station, which measures O_3, PM_{10}, $PM_{2.5,}$ CO, and $NO_2$and is located at Lexington Elementary School. Because the El Cajon monitoring station is located in areas where there is some traffic congestion, it is likely that pollutant concentrations measured at those monitoring stations are higher than concentrations that would be observed or measured in the Project area, and would thus provide a conservative estimate of background ambient air quality. Ambient concentrations of pollutants over the last three years are presented in Table 2. As indicated by monitoring data, ambient pollutant levels have steadily decreased over time due to federal and State regulations.

The 2015 8-hour federal ozone standard was exceeded at the El Cajon monitoring station five times in 2020, and twice both in 2021 and once in 2022. The El Cajon monitoring station measured 14 exceedance of the CAAQS for ozone in 2020, three times in 2021 and twice in 2022. The El Cajon monitoring station measured exceedances of the state standard for PM_{10} during the period from 2020 to 2022. No other exceedances of air quality standards for other pollutants were recorded at the El Cajon monitoring station. The data from the monitoring station indicates that air quality is in attainment of all other standards.

Table 2 Ambient Background Concentrations (ppm unless otherwise indicated)						
Pollutant	**Averaging Time**	**2020**	**2021**	**2022**	**Most Stringent Ambient Air Quality Standard**	**Monitoring Station**
Ozone	8 hour	0.08	0.08	0.09	0.070	El Cajon
	1 hour	0.09	0.09	0.10	0.09	El Cajon
$PM_{2.5}$	Annual	10.3 µg/m^3	9.7 µg/m^3	8.9 µg/m^3	12 µg/m^3	El Cajon
	24 hour maximum[1]	38.2 µg/m^3	30.2 µg/m^3	26.4 µg/m^3	35 µg/m^3	El Cajon
PM_{10}	Annual	23.5 µg/m^3	22.0 µg/m^3	21.6 µg/m^3	20 µg/m^3	El Cajon
	24 hour	55 µg/m^3	40 µg/m^3	44 µg/m^3	50 µg/m^3	El Cajon
NO_2	Annual	0.008	0.006	0.008	0.030	El Cajon
	1 hour	0.044	0.038	0.036	0.100	El Cajon
CO	8 hour	1.4	1.1	1.1	9.0	El Cajon
	1 hour	1.5	1.2	1.4	20.0	El Cajon

[1]$PM_{2.5}$ 24-hour NAAQS is defined as the 98th percentile of 3 years of measurements. One exceedance does not indicate a violation of the standard.
NA = data not available.
Note: Data included in Table 2 reflect the most recent data available at the time the project analysis was initiated.
Source: https://www.arb.ca.gov/adam/topfour/topfourdisplay.php
Source: https://www.sdapcd.org/content/dam/sdapcd/documents/monitoring/5-Year-Air-Quality.pdf

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

The County of San Diego (County of San Diego 2007) has approved guidelines for determining significance based on Appendix G.III of the State CEQA Guidelines. Section 4.0 of the County of San Diego Department of Planning and Land Use *Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality* (County of San Diego 2007) provides guidance that a project would have a significant environmental impact if:

1. The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).
2. The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. The project will result in emissions that exceed 250 pounds per day of NOx, or 75 pounds per day of VOCs.
4. The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.
5. The project will result in emissions of $PM_{2.5}$ that will exceed 55 pounds per day.
6. The project will result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 micrograms per cubic meter (5.0 $\mu g/m^3$) or greater at the maximum exposed individual.
7. The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the SLTs for ozone precursors listed in Table 5 of the Guidelines).
8. The project will expose sensitive receptors to substantial pollutant concentrations.
9. The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

The County of San Diego recognizes the SDAPCD's established screening level thresholds for air quality emissions (Rules 20.1 et seq.) as screening-level thresholds for land development projects. As stated above, projects that propose development that is consistent with the growth anticipated by the general plans and SANDAG's growth forecasts would be consistent with the RAQS and SIP. The County's General Plan is used to inform the Regional Transportation Plan and Sustainable Communities Strategy (SANDAG 2011), which includes growth projections that are used in the development of regional air quality standards for the RAQS and SIP. Also, projects must be consistent with the SIP rules such as the federally-approved rules and regulations adopted by the SDAPCD to be consistent with the SIP. Thus projects would be required to conform with measures adopted in the RAQS (including use of low-VOC architectural coatings, use of low-NO_x water heaters, and compliance with rules and regulations governing stationary sources) and would also be required to comply with all applicable rules and regulations adopted by the SDAPCD.

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation; or (b) result in a cumulatively considerable net increase of PM_{10} and/or $PM_{2.5}$ or exceed quantitative thresholds for O_3 precursors, oxides of nitrogen (NO_X) and volatile organic compounds (VOCs), project emissions may be evaluated based on the quantitative emission thresholds established by SDAPCD. As part of its air quality permitting process, the SDAPCD has established trigger thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA). The County of San Diego has adopted the SDAPCD's trigger thresholds as screening thresholds. The County has adopted the South Coast Air Quality Management Districts (SCAQMD's) screening level for VOCs.

The health effects of criteria pollutants are discussed in Section 2.2. As discussed in Section 2.2, the national and State ambient air quality standards that were adopted for these pollutants are designed to be protective of the public health. Thus the standards have been set at levels below which adverse public health effects are not anticipated. The SLTs are based on levels below which the SDAPCD and SCAQMD have determined that no adverse impact on ambient air quality would result. The SLTs are therefore designed to align with attainment of the ambient air quality standards and are intended to protect public health.

On September 8, 2005, the USEPA proposed new requirements that state and local governments have to meet as they implement the national ambient air quality standards for $PM_{2.5}$ (USEPA 2005). The new rule describes the implementation framework and requirements that state, local, and tribal governments must meet in developing their implementation plans. An implementation plan must show how an area that is not attaining the $PM_{2.5}$ standards will reduce air pollutant emissions in order to meet the standards as soon as possible. The implementation plan must include supporting technical analyses and any adopted state regulations as needed. State, local, and tribal plans must be reviewed and approved by the USEPA.

The health effects associated with exposure to fine particles are significant. Epidemiological studies have shown a significant correlation between elevated fine particle levels and premature mortality. Other important effects associated with fine particle exposure include aggravation of respiratory and cardiovascular disease (as indicated by increased hospital admissions, emergency room visits, absences from school or work, and restricted activity days), lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and cardiac arrhythmia.

Individuals particularly sensitive to fine particle exposure include older adults, people with heart and lung disease, and children.

In July 1997, the USEPA promulgated the National Ambient Air Quality Standards for Fine Particles ($PM_{2.5}$). The annual standard is a level of 15 micrograms per cubic meter, based on the 3-year average of annual mean $PM_{2.5}$ concentrations. The 24-hour standard was a level of 65 micrograms per cubic meter, based on the 3-year average of the 98th percentile of 24-hour concentrations. In 2013, the annual $PM_{2.5}$ standard was revised to a level of 12 micrograms per cubic meter, and the 24-hour $PM_{2.5}$ standard was revised to 35 micrograms per cubic meter, based on the 3-year average of the 98th percentile of 24-hour concentrations.

The County's SLTs of 55 lbs/day and 10 tons/year for $PM_{2.5}$ are based on CEQA significance thresholds adopted by the SCAQMD (SCAQMD 2019), which is classified as a serious nonattainment area for the 2012 $PM_{2.5}$ standards (USEPA 2021). The SCAQMD's thresholds are designed to meet the requirements of the USEPA to attain and maintain the ambient air quality

standards for $PM_{2.5}$. By attaining and maintaining the ambient air quality standards, the SLTs will reduce potential exposure to $PM_{2.5}$ and thus protect the public health.For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in the table below.

Table 3 Screening-Level Thresholds for Air Quality Impact Analysis			
Pollutant	Total Emissions		
Construction Emissions			
	Lb. per Day		
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NOx)	250		
Oxides of Sulfur (SOx)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)[1]	75		
Operational Emissions			
	Lb. Per Hour	Lb. per Day	Tons per Year
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	55	10
Oxides of Nitrogen (NOx)	25	250	40
Oxides of Sulfur (SOx)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million without T-BACT 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

In the event that emissions exceed these screening-level thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the State and Federal Ambient Air Quality Standards, including appropriate background levels. For nonattainment pollutants (ozone, with ozone precursors NOx and VOCs, $PM_{2.5}$ and PM_{10}), if emissions exceed the thresholds shown in Table 3, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs). In San Diego County, the County Department of Planning and Land Use identifies an excess cancer risk level of 1 in 1 million or less for projects that do not implement

Toxics Best Available Control Technology (T-BACT), and an excess cancer risk level of 10 in 1 million or less for projects that do implement T-BACT. The significance threshold for non-cancer health effects is a health hazard index of one or less. These significance thresholds are consistent with the San Diego Air Pollution Control District's Rule 1210 requirements for stationary sources. If a project has the potential to result in emissions of any TAC or HAP which result in a cancer risk of greater than 1 in 1 million without T-BACT, 10 in 1 million with T-BACT, or health hazard index of one or more, the project would be deemed to have a potentially significant impact.

With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as residences, schools (Preschool-12th Grade), hospitals, resident care facilities, or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project which has the potential to directly impact a sensitive receptor located within 1 mile and results in a health risk greater than the risk significance thresholds discussed above would be deemed to have a potentially significant impact. One mile was chosen as a conservative means of evaluating significance. As discussed in the SCAQMD's CEQA Air Quality Handbook, if there is an industrial source within a quarter mile of a sensitive receptor, planners should review the potential for toxic impacts. Therefore, use of a one mile radius is conservative because it is evaluating the potential for impacts for a radius four times greater than the distance recommended by the SCAQMD for industrial sources.

SDAPCD Rule 51 (Public Nuisance) also prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of any person. A nuisance could include objectionable odors because objectionable odors interfere with the comfort of persons affected. A project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of offsite receptors.

The impacts associated with construction and operation of the project were evaluated for significance based on these significance criteria.

4.0 PROJECT IMPACT ANALYSIS

The proposed Jamacha Boulevard Office Building includes both construction and operational activities that result in air emissions. Construction activities result in emissions associated with the construction of the project, including emissions of criteria pollutants from heavy equipment used during construction, emissions of criteria pollutants from worker and delivery vehicles, emissions of fugitive dust from earthmoving activities, and emissions of VOCs from architectural coatings application. Operational activities result in emissions associated with the project, including emissions of criteria pollutants from area sources such as landscaping equipment and maintenance use of architectural coatings, emissions of criteria pollutants from onsite energy use, and emissions of criteria pollutants from traffic, at full buildout.

4.1 Conformance to the Regional Air Quality Strategy

4.1.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).

The RAQS outlines SDAPCD's plans and control measures designed to attain the State air quality standards for ozone. In addition, the SDAPCD relies on the SIP, which includes the SDAPCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and the ARB, and the emissions and reduction strategies related to mobile sources are considered in the RAQS and SIP.

The RAQS relies on information from ARB and SANDAG, including projected growth in the County, mobile, area and all other source emissions in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions

through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would proposed development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the County of San Diego General Plan and SANDAG's growth projections, the project would be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality. This situation would warrant further analysis to determine if the proposed project and the surrounding projects exceed the growth projections used in the RAQS for the specific subregional area.

4.1.2 Significance of Impacts Prior to Mitigation

The project is proposing an office building to be located at the site. The project will provide office/employment uses at the site that will serve the Spring Valley Community.

As discussed in Section 3.0, projects that propose development that is consistent with the growth anticipated by the general plans and SANDAG's growth forecasts would be consistent with the RAQS and SIP. The County's General Plan is used to inform the Regional Transportation Plan and Sustainable Communities Strategy (SANDAG 2011), which includes growth projections that are used in the development of regional air quality standards for the RAQS and SIP. Projects that are consistent with the General Plan would be consistent with the RAQS and SIP, which are the SDAPCD's plans to attain and maintain the ambient air quality standards and protect the public health.

As part of its attainment planning process, the SDAPCD proposes and adopts Rules and Regulations to control air pollutants to demonstrate further progress toward attainment as part of the RAQS and SIP. The Project also will comply with any applicable rules and regulations that have been adopted as part of the RAQS and SIP by the SDAPCD. The applicable rules include

Rule 67.0.1, which governs the VOC content of architectural coatings, and Rule 55, which requires the control of fugitive dust during construction activities.

The project is therefore consistent with the RAQS and SIP and the impact is less than significant.

4.1.3 Design Considerations and Mitigation Measures

Because the impact is less than significant, there are no design considerations or mitigation measures required.

4.1.4 Conclusions

Because the Jamacha Boulevard Office Building is consistent with the General Plan land use at the site, the project would not conflict with the RAQS or SIP.

4.2 Conformance to Federal and State Ambient Air Quality Standards

The project will result in a significant impact to air quality if:

The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
The project will result in emissions that exceed 250 pounds per day of NOx, or 75 pounds per day of VOCs.
The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.
The project will result in emissions of $PM_{2.5}$ that will exceed 55 pounds per day.
The project will result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 micrograms per cubic meter (5.0 $\mu g/m^3$) or greater at the maximum exposed individual.

4.2.1 Construction Impacts

4.2.1.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), construction impacts would be potentially significant if they exceed the quantitative screening-level thresholds for attainment pollutants (NO_2, SO_2, and CO), and would result in a significant impact if they exceed the screening-level thresholds for nonattainment pollutants (ozone precursors and particulate matter).

4.2.1.2 Significance of Impacts Prior to Mitigation

The project was assumed to be constructed in a single phase, beginning with grading in 2021 and completing construction in one year. Because the start date has passed, the analysis is conservative because it assumes the construction fleet and vehicles in 2021 would be used during construction. Construction and vehicular fleet emissions decrease in future years due to the phase-out of older equipment and vehicles and the implementation of more stringent emission standards. Based on information from the applicant, the project would require export of 700 cubic yards of material during grading. Emissions of pollutants such as fugitive dust and heavy equipment exhaust that are generated during construction are generally highest near the construction site because pollutants disperse and become less concentrated as they are transported downwind of the source due to natural atmospheric turbulence. Emissions from the construction phase of the project were estimated using the CalEEMod Model, Version 2016.3.2 (SCAQMD 2016).[1]

[1] Since the analysis was completed, an updated version of CalEEMod has been released. The updated version of the model Version 2022.1 is the latest update to CalEEMod and brings a new web-based platform, with many new features and components, such as a geospatial interface, location-specific vehicle miles traveled analysis, climate risks analysis, and health and equity. These significant updates enable CalEEMod to deliver enhanced analysis of GHG and criteria pollutant emissions and support local governments to better address climate change, public health, and equity. The latest version of CalEEMod includes construction equipment emission factors from OFFROAD 2017-ORION Version 1.0.1, which takes into account phaseout of older equipment and additional control measures. Mobile source emissions were calculated using EMFAC2021, which also includes phaseout of older vehicles and updated emission control measures. Because the San Diego region did not provide specific information on VMT to be included in CalEEMod, default trip lengths are included in the update. The 2016 version of CalEEMod provides a more conservative estimate of emissions for the project because it does not include the additional control measures included in the updated version.

CalEEMod relies on the total area of the site and estimates site disturbance based on the maximum acres that can be graded given the construction equipment input in an 8-hour day. To account for standard dust control measures within the CalEEMod Model, it was assumed that watering three times day would reduce particulate matter emissions by 61% which is the standard default assumption within the CalEEMod model for watering three times daily, and that speeds on unpaved surfaces would be reduced to 15 mph. No other fugitive dust control measures were taken into account in the model.

Based on information from the applicant and CalEEMod model defaults, the following construction equipment would be used during site construction:

Grading:	1 grader, 6 hrs/day 1 water truck, 8 hrs/day 1 rubber tired dozer, 6 hrs/day 1 backhoe, 7 hrs/day
Building Construction:	1 forklift, 6 hrs/day 1 generator set, 8 hrs/day 1 tractor/loader/backhoe, 6 hrs/day 3 welders, 8 hrs/day
Paving:	1 cement and mortar mixer, 6 hrs/day 1 paver, 6 hrs/day 1 paving equipment, 8 hrs/day 1 roller, 7 hrs/day 1 tractor/loader/backhoe, 8 hrs/day
Architectural Coatings	1 air compressor, 6 hrs/day

Architectural coatings would be required to meet the requirements of SDAPCD Rule 67.0.1, which limits VOC content to 100 g/l for semi-gloss paints and 50 g/l for flat paints. This rule was taken into account in the CalEEMod Model.

Table 4 provides a summary of the emission estimates for construction of the Jamacha Boulevard Office Building. Refer to Attachment A for detailed CalEEMod Model outputs.

Table 4 Maximum Daily Estimated Construction Emissions						
Emission Source	**VOCs**	**NOx**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
lbs/day						
Grading						
Fugitive Dust	-	-	-	-	1.78	0.97
Off Road Diesel	1.71	17.88	8.60	0.003	0.08	0.02
On Road Diesel	0.03	1.07	0.26	0.02	0.40	0.12
Worker Trips	0.03	0.02	0.27	0.00	0.08	0.02
TOTAL	**1.77**	**18.97**	**9.13**	**0.023**	**2.34**	**1.13**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Building Construction						
Off Road Diesel	1.81	13.64	12.90	0.02	0.68	0.66
Vendor Trips	0.02	0.61	0.16	0.002	0.04	0.01
Worker Trips	0.05	0.03	0.37	0.001	0.12	0.03
TOTAL	**1.88**	**14.28**	**13.43**	**0.023**	**0.84**	**0.70**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Paving						
Asphalt Offgassing	0.02	-	-	-	-	-
Off Road Diesel	0.77	7.74	8.86	0.01	0.42	0.38
Worker Trips	0.05	0.03	0.34	0.001	0.11	0.03
TOTAL	**0.84**	**7.77**	**9.20**	**0.011**	**0.53**	**0.41**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Architectural Coatings						
Architectural Coatings Emissions	3.73	-	-	-	-	-
Off Road Diesel	0.22	1.53	1.82	0.003	0.09	0.09
Worker Trips	0.01	0.01	0.08	0.00	0.02	0.01
TOTAL	**3.96**	**1.54**	**1.90**	**0.003**	**0.11**	**0.10**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Maximum Daily Emissions						
Maximum Simultaneous Daily Emissions[1]	**5.84**	**22.05**	**22.63**	**0.04**	**5.51**	**3.25**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

[1]Maximum emissions of $PM_{2.5}$ and PM_{10} occur during mass grading. Maximum emissions of VOCs occur during simultaneous building construction and architectural coatings application. Maximum emissions of CO, NOx, and SOx occur during simultaneous building construction and paving.

As shown in Table 4, maximum simultaneous emissions are below the screening-level thresholds for all criteria pollutants. As discussed in Section 3.0, the SLTs are based on levels below which the SDAPCD and SCAQMD have determined that no adverse impact on ambient air quality would result. The SLTs are therefore designed to align with attainment of the ambient air quality standards and are intended to protect public health. Given that the project's emissions are below the SLTs for all criteria pollutants the project would not conflict with the health protective goals and intent of maintaining the ambient air quality standards.

4.2.1.3 Design Considerations

Project construction would employ dust control measures to reduce impacts as feasible. Dust control measures would include watering the site at least three times daily during active grading, and reducing vehicle speeds on unpaved surfaces to 15 mph, which are considered standard fugitive dust control measures during construction activities. The project will comply with SDAPCD Rule 55, which requires that visible dust emissions not be discharged beyond the property line for more than 3 minutes in any 60 minute period. In addition, the project would utilize low-VOC coatings in accordance with SDAPCD Rule 67.0.1 requirements. The project would reduce emissions to the extent feasible. Emissions would therefore be less than significant.

4.2.1.4 Conclusions

Project criteria pollutants emissions during construction would be less than significant.

4.2.2 Operational Impacts

4.2.2.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), operational impacts would be potentially significant if they exceed the quantitative screening-level thresholds for attainment pollutants (NO_2, SO_2, and CO), and would result in a significant impact if they exceed

the screening-level thresholds for nonattainment pollutants (ozone precursors and particulate matter).

4.2.2.2 Significance of Impacts Prior to Mitigation

The main operational impacts associated with the Project would include impacts associated with traffic; additional emissions would be associated with energy use and area sources such as landscaping. The area source emissions include emissions attributable to the use of landscaping equipment and painting for maintenance purposes. Based on CalEEMod model defaults, it was assumed that 10% of the surface area of the development would be painted annually for maintenance.

Project-generated traffic was estimated based on SANDAG trip generation rates for office buildings (SANDAG 2002), assumed to be 10 trips per 1,000 square feet per day on weekdays, resulting in 120 total trips per day. The traffic analysis (LOS Engineering 2021) estimated 9.74 trips per 1,000 square feet; therefore the analysis presented in this report is slightly more conservative. Project operational emissions were estimated using the CalEEMod Model, Version 2016.3.2, assuming construction starts in 2021 and would be complete within 12 months. The model was run assuming an operational year of 2022. As discussed in Section 2.0, no adjustments were made within the CalEEMod default assumptions to account for adoption of the SAFE rule as it was repealed in 2021. Emissions would decrease in future years due to the phaseout of older vehicles from the fleet and the adoption of increasingly stringent emission standards. Emissions were calculated for both summer and winter conditions, as well as for annual operations.

The results of the emission calculations, in lbs/day and tons/year, are summarized in Table 5 for buildout conditions. The CalEEMod outputs are presented in Appendix A.

Table 5 Total Operational Emissions						
	VOCs	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Summer, Lbs/day						
Area Sources	0.29	0.00	0.001	0.00	0.00	0.00
Energy Use	0.01	0.07	0.05	0.00	0.005	0.005
Vehicular Emissions	0.19	0.74	2.03	0.01	0.61	0.17
TOTAL	**0.48**	**0.81**	**2.09**	**0.01**	**0.62**	**0.18**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Winter, Lbs/day						
Area Sources	0.29	0.00	0.001	0.00	0.00	0.00
Energy Use	0.01	0.07	0.05	0.00	0.005	0.005
Vehicular Emissions	0.18	0.76	2.01	0.01	0.61	0.17
TOTAL	**0.48**	**0.82**	**2.07**	**0.01**	**0.62**	**0.17**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Tons/year						
Area Sources	0.05	0.00	0.00	0.00	0.00	0.00
Energy Use	0.001	0.01	0.01	0.00	0.001	0.001
Vehicular Emissions	0.02	0.11	0.28	0.001	0.08	0.02
TOTAL	**0.07**	**0.12**	**0.29**	**0.001**	**0.08**	**0.02**
Screening-Level Thresholds	13.7	40	100	40	15	10
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

Emissions associated with the project are below the County's screening-level thresholds for all pollutants. Because vehicular emissions decrease over time with phase-out of older vehicles and implementation of increasingly stringent emission controls, future emissions would decrease from the levels presented in Table 5, which are based on the 2022 vehicle fleet. As discussed in Section 3.0, the SLTs are based on levels below which the SDAPCD and SCAQMD have determined that no adverse impact on ambient air quality would result. The SLTs are therefore designed to align with attainment of the ambient air quality standards and are intended to protect public health. Given that the project's emissions are below the SLTs for all criteria pollutants the project would not conflict with the health protective goals and intent of maintaining the ambient air quality standards.

Projects involving traffic impacts may result in the formation of locally high concentrations of CO, known as CO "hot spots." The Traffic Impact Study (LOS Engineering 2021) concluded that the project would not result in any significant direct impacts. Because the project's emissions are two orders of magnitude lower than the screening-level thresholds, no CO "hot spots" would be anticipated due to project-related traffic.

Operational impacts would therefore be less than significant, thus avoiding the potential for adverse health outcomes to occur.

4.2.2.3 Design Considerations

No additional measures would be required to reduce impacts to less than significant.

4.2.2.4 Conclusions

Emissions of all criteria pollutants would be less than the screening-level thresholds for project operations and would therefore not result in a significant impact to the ambient air quality.

4.3 Cumulatively Considerable Net Increase of Criteria Pollutants

The project will result in a significant impact to air quality if:

The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the SLTs for ozone precursors listed in Table 5 of the Guidelines).

4.3.1 Construction Impacts

4.3.1.1 Guidelines for the Determination of Significance

Based on the County of San Diego guidelines (County of San Diego 2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the CAAQS and NAAQS. As discussed in Section 2.0, the SDAB is considered a nonattainment area for the NAAQS for ozone and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$.

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other (for example, within one-quarter mile) are simultaneously constructing projects. A project that has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NOx, or VOCs during construction would also have a significant cumulatively considerably net increase. In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Section 3.0.

4.3.1.2 Significance of Impacts Prior to Mitigation

In general, impacts associated with fugitive dust from construction are generally localized and would affect the area within approximately one-quarter mile of the project site. To evaluate the potential for cumulative impacts from grading at the Jamacha Boulevard Office Building site, the following equation was used (Desert Research Institute 1996), which is utilized in the SCAQMD's Localized Significance Threshold Methodology (SCAQMD 2003) to evaluate localized PM_{10} impacts:

$C_x = 0.9403\ C_0\ e^{-0.0462X}$

Where C_x = predicted PM_{10} concentration at X meters from the fenceline;
C_0 = PM_{10} concentration at the fenceline;
e = natural logarithm; and
X = distance in meters from the fenceline.

Conservatively assuming C_0 equals the 24-hour ambient air quality standard of 50 µg/m^3, fugitive PM_{10} concentrations would decrease with distance from the fenceline. As shown in Figure 4 below, by 100 meters (approximately 330 feet) from the project boundary, the concentration of PM_{10} would decrease by 99 percent.

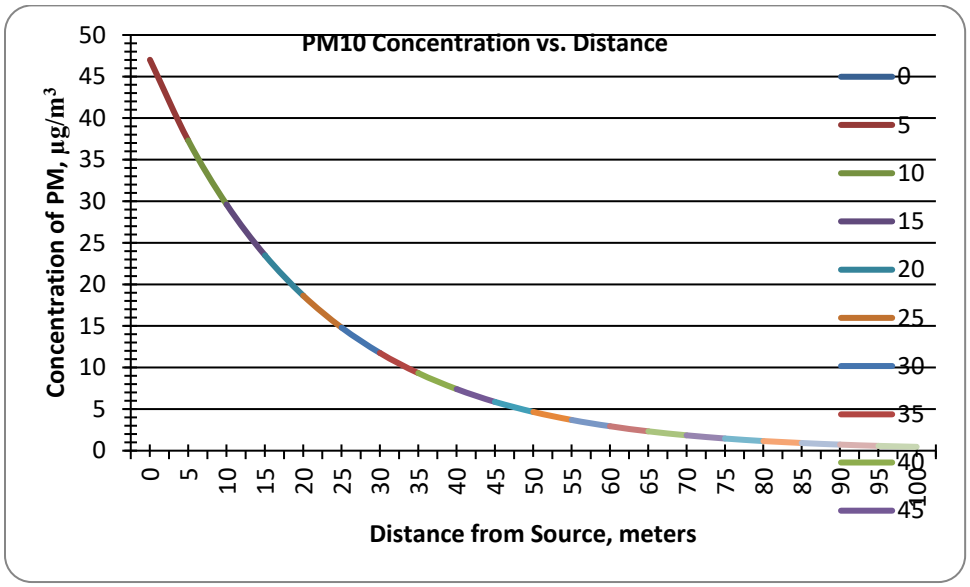

Figure 4. PM_{10} Concentrations versus Distance

The Project is an infill project with the area within one-quarter mile already developed and/or open space adjacent to the Sweetwater Reservoir. Two projects were identified within one-quarter mile of the site, as listed below in Table 6:

Table 6 Cumulative Projects			
Project No.	APN	Project Name	Project Description
PDS2016-STP-16-017	584-420-30-00	Car Sales Office	Remove existing 372 SF car sales office building and provide a new 869 SF auto sales office & retail area
PDS2016-STP-16-013	579-191-67-00	Arco - Jamacha Gas Station	Site Plan proposes construction of 2,400 SF food mart building and 3,200 SF auto fueling canopy with dispensers and islands

Both projects listed in Table 6 are smaller in size than the proposed Project. No information is available to quantify the emissions from the two projects; however, even if the maximum simultaneous emissions were of a similar order of magnitude to the emissions from construction of the project, the cumulative emissions would remain below the County's significance thresholds. The projects in Table 6 would be required to comply with the same emission standards and rules that the project would. The project's emissions are substantially below the significance thresholds. Due to the distance of the Project site to the cumulative project, impacts would be limited to localized areas. The project will include a condition for the County to coordinate construction schedules to avoid simultaneous earthwork. Cumulative impacts would be less than cumulatively considerable.

4.3.1.3 Design Considerations

As no cumulatively considerable impact has been identified for the project, no design considerations are required. To the extent feasible, the project applicant will work with the County of San Diego to coordinate grading schedules for the cumulative projects listed above to minimum simultaneous particulate emissions.

4.3.1.4 Conclusions

Impacts would be less than significant.

4.3.2 Operational Impacts

4.3.2.1 Guidelines for the Determination of Significance

As discussed above, based on the County of San Diego guidelines (County of San Diego 2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in NOx, VOCs, PM_{10}, and $PM_{2.5}$. In accordance with the guidelines, a project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of nonattainment pollutants would also have a cumulatively considerable net increase. Also, projects that cause road intersections to operate at or below a LOS E and create a CO "hot spot" create a cumulatively considerable net increase of CO.

4.3.2.2 Significance of Impacts Prior to Mitigation

Emissions of nonattainment pollutants PM_{10}, $PM_{2.5}$, NOx, or VOCs would be below the screening-level thresholds for project operations. The project would therefore not result in a cumulatively considerable net increase in nonattainment pollutants. The Traffic Impact Study (LOS Engineering 2021) concluded that no direct impacts on LOS would result from the project. The Traffic Impact Study indicated that the project would contribute to the County's Traffic Impact Fee (TIF) program to mitigate its potential contribution to cumulative traffic in the Spring Valley area. Therefore, no exceedance of the CO standard would result from project-related traffic.

4.3.2.3 Design Considerations

Because the project's impacts are less than significant, no design considerations are proposed.,

4.3.2.4 Conclusions

Emissions of nonattainment pollutants are less than the screening-level thresholds for nonattainment pollutants. Therefore, the project would not result in an exceedance of the ozone standard. Because the project is proposing development that is consistent with traffic projections used by SANDAG, it would not result in cumulatively considerable impacts. Impacts would be less than cumulatively considerable.

4.4 Impacts to Sensitive Receptors

4.4.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project will expose sensitive receptors to substantial pollutant concentrations.

Air quality regulators typically define "sensitive receptors" as schools, hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. However, for the purpose of CEQA analysis, the County of San Diego definition of "sensitive receptors" includes residences (County of San Diego 2007). The two primary emissions of concern for impacts to sensitive receptors are CO and diesel particulate matter. As discussed in Section 4.3.2.2, operational impacts would not result in CO "hot spots". This analysis therefore focuses on diesel particulate matter.

4.4.2 Significance of Impacts Prior to Mitigation

The project would result in emissions of diesel particulate matter during construction activities and also due to minor amounts of truck traffic associated with project operations. While office buildings do not generate substantial truck trips, the CalEEMod model default vehicle fleet mix was used to conduct the evaluation of operational impacts. This represents a conservative assumption because the on-road vehicle fleet mix represents County-wide data, which includes

heavy duty trucks used for goods movement. To evaluate whether project construction could pose a significant impact to nearby sensitive receptors, an evaluation of diesel exhaust particulate matter was conducted. Diesel exhaust particulate matter is known to the state of California as carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the California Office of Environmental Health Hazard Assessment (OEHHA) guidelines, *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2003) as 24 hours per day, 7 days per week, 365 days per year, for 70 years. Diesel exhaust particulate matter would be emitted during construction due to the operation of heavy equipment at the site. Because diesel exhaust particulate matter is considered to be carcinogenic, long-term exposure to diesel exhaust emissions have the potential to result in adverse health impacts.

As discussed in Section 1.0, the site is surrounded by residences to the north, east, and south, a church to the west, and an elementary school to the southwest. The residences are adjacent to the site. These receptors were all considered sensitive receptors in the analysis. To assess whether there is a potential for a significant impact associated with exposure to diesel exhaust particulate matter, a health risk evaluation was conducted on the particulate emissions. The amount of diesel particulate varies with the project schedule and construction phasing; there are two phases proposed to construct the project. The on-site construction heavy equipment diesel particulate emissions calculated by the CalEEMod Model were 0.0796 tons.

Pro-rating these emissions to a 30-year exposure scenario, the emissions are 0.002653 tons/year. The construction heavy equipment sources were represented as an elevated volume source placed at the site. The source is modeled as an elevated volume source to account for buoyancy resulting from the heat of the exhaust. Emissions were allocated to this source based on the estimated emission rates for diesel particulate during construction.

For the purpose of this evaluation, the U.S. EPA's approved air dispersion model, AERMOD, was run to estimate ground-level concentrations of diesel particulate matter. Receptors were placed at

the locations of existing residential dwellings and the church adjacent to the site. The maximum annual ground-level concentration is predicted to be 0.0126 micrograms/cubic meter.

Based on the results of the screening model, the maximum excess cancer risk predicted at the nearest receptor would be 8.6 in 1 million without implementation of T-BACT. Without T-BACT, this value is above the screening threshold of one in one million. However, with implementation of T-BACT, impacts would be reduced to a less than significant levels, below the County of San Diego's significance threshold of 10 in 1 million with implementation of T-BACT.

In accordance with the County of San Diego Planning and Development Services project requirements to comply with County impact guidelines, the project will request the construction contractor to provide a construction fleet that uses any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or ARB certified Tier III or IV equipment. Because the exact mix of construction equipment within the fleet is unknown at this time, it is not possible to precisely model construction equipment within the CalEEMod model. However, for conservative purposes, the model was run assuming all heavy construction equipment would meet Tier III emission standards. This measure would reduce overall construction equipment emissions by approximately 1.3%. Thus the risk would be reduced by 1.3% to 8.5 in 1 million, which is below the County's significance threshold of 10 in 1 million with application of T-BACT. It should be noted that CalEEMod utilizes default assumptions about the makeup of the construction fleet within the San Diego region to calculate construction emissions from heavy construction equipment. The fleet assumptions for 2021 (the year of construction) already include Tier III and Tier IV equipment.

The risk associated with exposure to diesel particulate from construction of the project is therefore not significant. Results of the risk evaluation and risk calculations are included in Appendix A.

Vehicular traffic may result in emissions of toxic air contaminants (TACs). Minor amounts of TACs are found in light-duty vehicle exhaust; however, the main source of on-road TACs is from diesel-powered heavy-duty trucks. Because the project is an office building, the amount of truck

traffic will be minimal, and no risks to surrounding sensitive receptors would be anticipated from project operations.

4.4.3 Mitigation Measures and Design Considerations

The project will require the construction fleet to meet ARB certified Tier III or IV equipment Because impacts to sensitive receptors from diesel particulate emissions would be less than significant, no additional mitigation measures are required.

Results of the risk evaluation and risk calculations are included in Appendix A.

Vehicular traffic may result in emissions of toxic air contaminants (TACs). Minor amounts of TACs are found in light-duty vehicle exhaust; however, the main source of on-road TACs is from diesel-powered heavy-duty trucks. Because the project is an office building, the amount of truck traffic will be minimal, and no risks to surrounding sensitive receptors would be anticipated from project operations.

4.4.3 Mitigation Measures and Design Considerations

Because impacts to sensitive receptors from diesel particulate emissions would be less than significant, no additional mitigation measures are required.

4.4.4 Conclusions

Impacts to sensitive receptors would be less than significant.

4.5 Odor Impacts

4.5.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

4.5.2 Significance of Impacts Prior to Mitigation

Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. Because the construction equipment would be operating at various locations throughout the construction site, and because any operation that would occur in the vicinity of existing receptors would be temporary, impacts associated with odors during construction are therefore not considered significant.

During construction, diesel equipment operating at the site may generate some nuisance odors; however, due to the distance of sensitive receptors to the project site and the temporary nature of construction, odors associated with project construction would not be significant. The project is not considered a source of objectionable odors from operations because the project is an office building and does not include any of the following odor sources:

- Farming and livestock
- Wastewater treatment plant
- Food processing plant
- Chemical plant
- Composting
- Refinery
- Landfill
- Dairy
- Fiberglass molding (SCAQMD 1999).

4.5.3 Design Considerations

Because the project would not generate objectionable odors or place sensitive receptors near existing odor sources that would affect a considerable number of persons or the public, no additional design considerations are required.

4.5.4 Conclusions

Due to the nature of the project as an office building, the project is not identified as a specific source of nuisance odors. Odor impacts are therefore less than significant.

5.0 SUMMARY OF RECOMMENDED DESIGN FEATURES, IMPACTS, AND MITIGATION

In summary, the proposed project would result in emissions of air pollutants for both the construction phase and operational phase of the project. The air quality impact analysis evaluated the following air quality issues, and made the following conclusions:

The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).

The project is an office building and is consistent with the General Plan designation and the zoning for the site. The project is therefore consistent with the RAQS and SIP.

The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
The project will result in emissions that exceed 250 pounds per day of NOx, or 75 pounds per day of VOCs.

The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.

The project will result in emissions of $PM_{2.5}$ that will exceed 55 pounds per day.
The project will result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 micrograms per cubic meter (5.0 $\mu g/m^3$) or greater at the maximum exposed individual.

Both construction and operational emissions were evaluated to address these impacts. During both construction and operations, the project would result in emissions that are less than the screening-level thresholds for all criteria pollutants. To reduce the emissions to the extent feasible, fugitive

dust control measures will be implemented during construction. Measures that are incorporated into the project description to reduce emissions associated with construction include the following:

- Application of water three times daily during grading on active grading sites
- Reduce speeds to 15 mph on unpaved roads
- Use architectural coatings with a VOC content that meets the requirements of SDAPCD Rule 67.0.1
- Use of a construction fleet that uses any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or ARB certified Tier III or IV equipment to reduce construction heavy equipment emission rates
- Coordinated construction schedules with cumulative projects to reduce simultaneous particulate emissions

These measures constitute best management practices for construction.

Operational emissions would be associated with traffic accessing the project, and with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the project emissions would not exceed the screening-level thresholds. Furthermore, emissions associated with traffic would decrease with time as older vehicles are phased out and more stringent emission standards are applied to new vehicles. Impacts will be less than significant.

The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the SLTs for ozone precursors listed in Table 5 of the Guidelines).

Emissions of nonattainment pollutants would be consistent with the construction emissions evaluated in the RAQS and SIP for construction projects and would not be cumulatively considerable. Emissions of PM_{10} would be localized and would not result in a cumulatively considerable impact.

Operational emissions are below the screening-level thresholds and would not be cumulatively considerable.

The project will expose sensitive receptors to substantial pollutant concentrations.

As discussed in Section 4.4, the project would not expose sensitive receptors to substantial pollutant concentrations.

The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

The project would not generate objectionable odors that would affect a considerable number of persons or the public. Odor impacts are less than significant.

6.0 REFERENCES

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7.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

Preparer:

Valorie L. Thompson, Ph.D.
Scientific Resources Associated
1328 Kaimalino Lane
San Diego, CA 92109

Jeremy Louden

Contacts:

Department of Planning and Development Services
5510 Overland Avenue
San Diego, CA 92123

Appendix A

Emission Calculations

Jamacha Office Building

San Diego Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	12.00	1000sqft	1.08	12,000.00	0
Other Asphalt Surfaces	0.54	Acre	0.54	23,522.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	556.22	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 33% RPS

Land Use - Project description

Construction Phase - Project description

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Plus water truck

Off-road Equipment -

Grading - Site grading

Architectural Coating - Rule 67.0.1 coatings

Vehicle Trips - SANDAG

Area Coating - Rule 67.0.1 coatings

Energy Use -

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - Tier 3 equipment

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	23.00
tblConstructionPhase	NumDays	200.00	154.00
tblConstructionPhase	NumDays	4.00	21.00
tblConstructionPhase	NumDays	10.00	86.00

tblGrading	AcresOfGrading	7.88	1.08
tblLandUse	LotAcreage	0.28	1.08
tblOffRoadEquipment	HorsePower	402.00	250.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	720.49	556.22
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblSequestration	NumberOfNewTrees	0.00	39.00
tblVehicleTrips	WD_TR	11.03	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2021	5.8420	22.0499	22.6281	0.0394	4.6533	1.1025	5.4293	2.5104	1.0464	3.2243	0.0000	3,692.7966	3,692.7966	0.7871	0.0000	3,712.4753
Maximum	**5.8420**	**22.0499**	**22.6281**	**0.0394**	**4.6533**	**1.1025**	**5.4293**	**2.5104**	**1.0464**	**3.2243**	**0.0000**	**3,692.7966**	**3,692.7966**	**0.7871**	**0.0000**	**3,712.4753**

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	lb/day										lb/day					
2021	4.5108	19.3882	24.2016	0.0394	1.8649	1.1207	2.3235	0.9923	1.1205	1.4509	0.0000	3,692.7966	3,692.7966	0.7871	0.0000	3,712.4753
Maximum	**4.5108**	**19.3882**	**24.2016**	**0.0394**	**1.8649**	**1.1207**	**2.3235**	**0.9923**	**1.1205**	**1.4509**	**0.0000**	**3,692.7966**	**3,692.7966**	**0.7871**	**0.0000**	**3,712.4753**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**22.79**	**12.07**	**-6.95**	**0.00**	**59.92**	**-1.65**	**57.20**	**60.47**	**-7.08**	**55.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Area	0.2888	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003
Energy	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559
Mobile	0.1851	0.7404	2.0311	7.0800e-003	0.6081	5.7100e-003	0.6138	0.1625	5.3300e-003	0.1678		719.8916	719.8916	0.0369		720.8133
Total	**0.4810**	**0.8055**	**2.0870**	**7.4700e-003**	**0.6081**	**0.0107**	**0.6187**	**0.1625**	**0.0103**	**0.1728**		**797.9862**	**797.9862**	**0.0384**	**1.4300e-003**	**799.3722**

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	lb/day										lb/day					
Area	0.2888	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003
Energy	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559
Mobile	0.1851	0.7404	2.0311	7.0800e-003	0.6081	5.7100e-003	0.6138	0.1625	5.3300e-003	0.1678		719.8916	719.8916	0.0369		720.8133
Total	**0.4810**	**0.8055**	**2.0870**	**7.4700e-003**	**0.6081**	**0.0107**	**0.6187**	**0.1625**	**0.0103**	**0.1728**		**797.9862**	**797.9862**	**0.0384**	**1.4300e-003**	**799.3722**

	ROG	NOx	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	Grading	Grading	1/1/2021	1/31/2021	5	21	
2	Paving	Paving	2/1/2021	5/31/2021	5	86	
3	Building Construction	Building Construction	5/1/2021	12/2/2021	5	154	
4	Architectural Coating	Architectural Coating	12/1/2021	12/31/2021	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.08

Acres of Paving: 0.54

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 18,000; Non-Residential Outdoor: 6,000; Striped Parking Area: 1,411 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	6.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	250	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	14.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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	lb/day										lb/day					
Fugitive Dust					4.5711	0.0000	4.5711	2.4886	0.0000	2.4886			0.0000			0.0000
Off-Road	1.7062	17.8639	8.5907	0.0222		0.7755	0.7755		0.7135	0.7135		2,152.8796	2,152.8796	0.6963		2,170.2868
Total	**1.7062**	**17.8639**	**8.5907**	**0.0222**	**4.5711**	**0.7755**	**5.3466**	**2.4886**	**0.7135**	**3.2020**		**2,152.8796**	**2,152.8796**	**0.6963**		**2,170.2868**

3.2 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0346	0.0225	0.2652	8.2000e-004	0.0822	5.7000e-004	0.0827	0.0218	5.2000e-004	0.0223		81.4441	81.4441	2.3200e-003		81.5022
Total	**0.0346**	**0.0225**	**0.2652**	**8.2000e-004**	**0.0822**	**5.7000e-004**	**0.0827**	**0.0218**	**5.2000e-004**	**0.0223**		**81.4441**	**81.4441**	**2.3200e-003**		**81.5022**

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	lb/day										lb/day					
Fugitive Dust					1.7827	0.0000	1.7827	0.9705	0.0000	0.9705			0.0000			0.0000
Off-Road	0.5461	10.7897	12.4404	0.0222		0.4580	0.4580		0.4580	0.4580	0.0000	2,152.8796	2,152.8796	0.6963		2,170.2868
Total	**0.5461**	**10.7897**	**12.4404**	**0.0222**	**1.7827**	**0.4580**	**2.2408**	**0.9705**	**0.4580**	**1.4286**	**0.0000**	**2,152.8796**	**2,152.8796**	**0.6963**		**2,170.2868**

3.2 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0346	0.0225	0.2652	8.2000e-004	0.0822	5.7000e-004	0.0827	0.0218	5.2000e-004	0.0223		81.4441	81.4441	2.3200e-003		81.5022
Total	**0.0346**	**0.0225**	**0.2652**	**8.2000e-004**	**0.0822**	**5.7000e-004**	**0.0827**	**0.0218**	**5.2000e-004**	**0.0223**		**81.4441**	**81.4441**	**2.3200e-003**		**81.5022**

3.3 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	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0165					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7903**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.3 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0450	0.0292	0.3448	1.0600e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		105.8773	105.8773	3.0200e-003		105.9529
Total	**0.0450**	**0.0292**	**0.3448**	**1.0600e-003**	**0.1068**	**7.4000e-004**	**0.1075**	**0.0283**	**6.8000e-004**	**0.0290**		**105.8773**	**105.8773**	**3.0200e-003**		**105.9529**

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	lb/day										lb/day					
Off-Road	0.3195	6.6399	9.8512	0.0135		0.3864	0.3864		0.3864	0.3864	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0165					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3360**	**6.6399**	**9.8512**	**0.0135**		**0.3864**	**0.3864**		**0.3864**	**0.3864**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.3 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0450	0.0292	0.3448	1.0600e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		105.8773	105.8773	3.0200e-003		105.9529
Total	**0.0450**	**0.0292**	**0.3448**	**1.0600e-003**	**0.1068**	**7.4000e-004**	**0.1075**	**0.0283**	**6.8000e-004**	**0.0290**		**105.8773**	**105.8773**	**3.0200e-003**		**105.9529**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0181	0.6110	0.1557	1.6200e-003	0.0406	1.2800e-003	0.0419	0.0117	1.2300e-003	0.0129		174.8112	174.8112	0.0125		175.1234
Worker	0.0484	0.0315	0.3713	1.1400e-003	0.1150	7.9000e-004	0.1158	0.0305	7.3000e-004	0.0312		114.0217	114.0217	3.2500e-003		114.1031
Total	**0.0666**	**0.6424**	**0.5270**	**2.7600e-003**	**0.1556**	**2.0700e-003**	**0.1577**	**0.0422**	**1.9600e-003**	**0.0442**		**288.8329**	**288.8329**	**0.0157**		**289.2265**

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	lb/day										lb/day					
Off-Road	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**0.6407**	**12.0767**	**13.4786**	**0.0221**		**0.7315**	**0.7315**		**0.7315**	**0.7315**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0181	0.6110	0.1557	1.6200e-003	0.0406	1.2800e-003	0.0419	0.0117	1.2300e-003	0.0129		174.8112	174.8112	0.0125		175.1234
Worker	0.0484	0.0315	0.3713	1.1400e-003	0.1150	7.9000e-004	0.1158	0.0305	7.3000e-004	0.0312		114.0217	114.0217	3.2500e-003		114.1031
Total	**0.0666**	**0.6424**	**0.5270**	**2.7600e-003**	**0.1556**	**2.0700e-003**	**0.1577**	**0.0422**	**1.9600e-003**	**0.0442**		**288.8329**	**288.8329**	**0.0157**		**289.2265**

3.5 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	lb/day										lb/day					
Archit. Coating	3.7337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**3.9526**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.5 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0104	6.7400e-003	0.0796	2.5000e-004	0.0246	1.7000e-004	0.0248	6.5400e-003	1.6000e-004	6.6900e-003		24.4332	24.4332	7.0000e-004		24.4507
Total	**0.0104**	**6.7400e-003**	**0.0796**	**2.5000e-004**	**0.0246**	**1.7000e-004**	**0.0248**	**6.5400e-003**	**1.6000e-004**	**6.6900e-003**		**24.4332**	**24.4332**	**7.0000e-004**		**24.4507**

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	lb/day										lb/day					
Archit. Coating	3.7337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**3.7931**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.5 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0104	6.7400e-003	0.0796	2.5000e-004	0.0246	1.7000e-004	0.0248	6.5400e-003	1.6000e-004	6.6900e-003		24.4332	24.4332	7.0000e-004		24.4507
Total	**0.0104**	**6.7400e-003**	**0.0796**	**2.5000e-004**	**0.0246**	**1.7000e-004**	**0.0248**	**6.5400e-003**	**1.6000e-004**	**6.6900e-003**		**24.4332**	**24.4332**	**7.0000e-004**		**24.4507**

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	lb/day										lb/day					
Mitigated	0.1851	0.7404	2.0311	7.0800e-003	0.6081	5.7100e-003	0.6138	0.1625	5.3300e-003	0.1678		719.8916	719.8916	0.0369		720.8133
Unmitigated	0.1851	0.7404	2.0311	7.0800e-003	0.6081	5.7100e-003	0.6138	0.1625	5.3300e-003	0.1678		719.8916	719.8916	0.0369		720.8133

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	120.00	29.52	12.60	219,215	219,215
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	120.00	29.52	12.60	219,215	219,215

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Other Asphalt Surfaces	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

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	lb/day										lb/day					
NaturalGas Mitigated	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559
NaturalGas Unmitigated	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559

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	lb/day										lb/day					
General Office Building	663.781	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.1600e-003**	**0.0651**	**0.0547**	**3.9000e-004**		**4.9500e-003**	**4.9500e-003**		**4.9500e-003**	**4.9500e-003**		**78.0919**	**78.0919**	**1.5000e-003**	**1.4300e-003**	**78.5559**

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	lb/day										lb/day					
General Office Building	0.663781	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.1600e-003**	**0.0651**	**0.0547**	**3.9000e-004**		**4.9500e-003**	**4.9500e-003**		**4.9500e-003**	**4.9500e-003**		**78.0919**	**78.0919**	**1.5000e-003**	**1.4300e-003**	**78.5559**

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	lb/day										lb/day					
Mitigated	0.2888	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003
Unmitigated	0.2888	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2651					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003
Total	**0.2888**	**1.0000e-005**	**1.2800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.7400e-003**	**2.7400e-003**	**1.0000e-005**		**2.9300e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2651					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003
Total	**0.2888**	**1.0000e-005**	**1.2800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.7400e-003**	**2.7400e-003**	**1.0000e-005**		**2.9300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Jamacha Office Building

San Diego Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	12.00	1000sqft	1.08	12,000.00	0
Other Asphalt Surfaces	0.54	Acre	0.54	23,522.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	556.22	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 33% RPS

Land Use - Project description

Construction Phase - Project description

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Plus water truck

Off-road Equipment -

Grading - Site grading

Architectural Coating - Rule 67.0.1 coatings

Vehicle Trips - SANDAG

Area Coating - Rule 67.0.1 coatings

Energy Use -

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - Tier 3 equipment

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	23.00
tblConstructionPhase	NumDays	200.00	154.00
tblConstructionPhase	NumDays	4.00	21.00
tblConstructionPhase	NumDays	10.00	86.00

tblGrading	AcresOfGrading	7.88	1.08
tblLandUse	LotAcreage	0.28	1.08
tblOffRoadEquipment	HorsePower	402.00	250.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	720.49	556.22
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblSequestration	NumberOfNewTrees	0.00	39.00
tblVehicleTrips	WD_TR	11.03	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2021	5.8509	22.0557	22.6028	0.0392	4.6533	1.1025	5.4293	2.5104	1.0464	3.2243	0.0000	3,674.8058	3,674.8058	0.7876	0.0000	3,694.4953
Maximum	**5.8509**	**22.0557**	**22.6028**	**0.0392**	**4.6533**	**1.1025**	**5.4293**	**2.5104**	**1.0464**	**3.2243**	**0.0000**	**3,674.8058**	**3,674.8058**	**0.7876**	**0.0000**	**3,694.4953**

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	lb/day										lb/day					
2021	4.5197	19.3940	24.1763	0.0392	1.8649	1.1207	2.3235	0.9923	1.1206	1.4509	0.0000	3,674.8058	3,674.8058	0.7876	0.0000	3,694.4953
Maximum	**4.5197**	**19.3940**	**24.1763**	**0.0392**	**1.8649**	**1.1207**	**2.3235**	**0.9923**	**1.1206**	**1.4509**	**0.0000**	**3,674.8058**	**3,674.8058**	**0.7876**	**0.0000**	**3,694.4953**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**22.75**	**12.07**	**-6.96**	**0.00**	**59.92**	**-1.65**	**57.20**	**60.47**	**-7.08**	**55.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Area	0.2888	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003
Energy	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559
Mobile	0.1794	0.7583	2.0106	6.7100e-003	0.6081	5.7500e-003	0.6138	0.1625	5.3700e-003	0.1679		682.6550	682.6550	0.0372		683.5844
Total	**0.4753**	**0.8234**	**2.0666**	**7.1000e-003**	**0.6081**	**0.0107**	**0.6188**	**0.1625**	**0.0103**	**0.1728**		**760.7496**	**760.7496**	**0.0387**	**1.4300e-003**	**762.1433**

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	lb/day										lb/day					
Area	0.2888	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003
Energy	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559
Mobile	0.1794	0.7583	2.0106	6.7100e-003	0.6081	5.7500e-003	0.6138	0.1625	5.3700e-003	0.1679		682.6550	682.6550	0.0372		683.5844
Total	**0.4753**	**0.8234**	**2.0666**	**7.1000e-003**	**0.6081**	**0.0107**	**0.6188**	**0.1625**	**0.0103**	**0.1728**		**760.7496**	**760.7496**	**0.0387**	**1.4300e-003**	**762.1433**

	ROG	NOx	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	Grading	Grading	1/1/2021	1/31/2021	5	21	
2	Paving	Paving	2/1/2021	5/31/2021	5	86	
3	Building Construction	Building Construction	5/1/2021	12/2/2021	5	154	
4	Architectural Coating	Architectural Coating	12/1/2021	12/31/2021	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.08

Acres of Paving: 0.54

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 18,000; Non-Residential Outdoor: 6,000; Striped Parking Area: 1,411 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	6.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	250	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	14.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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	lb/day										lb/day					
Fugitive Dust					4.5711	0.0000	4.5711	2.4886	0.0000	2.4886			0.0000			0.0000
Off-Road	1.7062	17.8639	8.5907	0.0222		0.7755	0.7755		0.7135	0.7135		2,152.8796	2,152.8796	0.6963		2,170.2868
Total	**1.7062**	**17.8639**	**8.5907**	**0.0222**	**4.5711**	**0.7755**	**5.3466**	**2.4886**	**0.7135**	**3.2020**		**2,152.8796**	**2,152.8796**	**0.6963**		**2,170.2868**

3.2 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0392	0.0252	0.2493	7.7000e-004	0.0822	5.7000e-004	0.0827	0.0218	5.2000e-004	0.0223		76.4548	76.4548	2.2000e-003		76.5097
Total	**0.0392**	**0.0252**	**0.2493**	**7.7000e-004**	**0.0822**	**5.7000e-004**	**0.0827**	**0.0218**	**5.2000e-004**	**0.0223**		**76.4548**	**76.4548**	**2.2000e-003**		**76.5097**

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	lb/day										lb/day					
Fugitive Dust					1.7827	0.0000	1.7827	0.9705	0.0000	0.9705			0.0000			0.0000
Off-Road	0.5461	10.7897	12.4404	0.0222		0.4580	0.4580		0.4580	0.4580	0.0000	2,152.8796	2,152.8796	0.6963		2,170.2868
Total	**0.5461**	**10.7897**	**12.4404**	**0.0222**	**1.7827**	**0.4580**	**2.2408**	**0.9705**	**0.4580**	**1.4286**	**0.0000**	**2,152.8796**	**2,152.8796**	**0.6963**		**2,170.2868**

3.2 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0392	0.0252	0.2493	7.7000e-004	0.0822	5.7000e-004	0.0827	0.0218	5.2000e-004	0.0223		76.4548	76.4548	2.2000e-003		76.5097
Total	**0.0392**	**0.0252**	**0.2493**	**7.7000e-004**	**0.0822**	**5.7000e-004**	**0.0827**	**0.0218**	**5.2000e-004**	**0.0223**		**76.4548**	**76.4548**	**2.2000e-003**		**76.5097**

3.3 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	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0165					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7903**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.3 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0510	0.0328	0.3241	1.0000e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		99.3912	99.3912	2.8600e-003		99.4626
Total	**0.0510**	**0.0328**	**0.3241**	**1.0000e-003**	**0.1068**	**7.4000e-004**	**0.1075**	**0.0283**	**6.8000e-004**	**0.0290**		**99.3912**	**99.3912**	**2.8600e-003**		**99.4626**

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	lb/day										lb/day					
Off-Road	0.3195	6.6399	9.8512	0.0135		0.3864	0.3864		0.3864	0.3864	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0165					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3360**	**6.6399**	**9.8512**	**0.0135**		**0.3864**	**0.3864**		**0.3864**	**0.3864**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.3 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0510	0.0328	0.3241	1.0000e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		99.3912	99.3912	2.8600e-003		99.4626
Total	**0.0510**	**0.0328**	**0.3241**	**1.0000e-003**	**0.1068**	**7.4000e-004**	**0.1075**	**0.0283**	**6.8000e-004**	**0.0290**		**99.3912**	**99.3912**	**2.8600e-003**		**99.4626**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0191	0.6094	0.1734	1.5800e-003	0.0406	1.3400e-003	0.0420	0.0117	1.2800e-003	0.0130		170.2916	170.2916	0.0133		170.6232
Worker	0.0549	0.0353	0.3491	1.0700e-003	0.1150	7.9000e-004	0.1158	0.0305	7.3000e-004	0.0312		107.0367	107.0367	3.0800e-003		107.1135
Total	**0.0740**	**0.6447**	**0.5224**	**2.6500e-003**	**0.1556**	**2.1300e-003**	**0.1578**	**0.0422**	**2.0100e-003**	**0.0442**		**277.3282**	**277.3282**	**0.0164**		**277.7368**

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	lb/day										lb/day					
Off-Road	0.6407	12.0767	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**0.6407**	**12.0767**	**13.4786**	**0.0221**		**0.7315**	**0.7315**		**0.7315**	**0.7315**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0191	0.6094	0.1734	1.5800e-003	0.0406	1.3400e-003	0.0420	0.0117	1.2800e-003	0.0130		170.2916	170.2916	0.0133		170.6232
Worker	0.0549	0.0353	0.3491	1.0700e-003	0.1150	7.9000e-004	0.1158	0.0305	7.3000e-004	0.0312		107.0367	107.0367	3.0800e-003		107.1135
Total	**0.0740**	**0.6447**	**0.5224**	**2.6500e-003**	**0.1556**	**2.1300e-003**	**0.1578**	**0.0422**	**2.0100e-003**	**0.0442**		**277.3282**	**277.3282**	**0.0164**		**277.7368**

3.5 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	lb/day										lb/day					
Archit. Coating	3.7337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**3.9526**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.5 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0118	7.5700e-003	0.0748	2.3000e-004	0.0246	1.7000e-004	0.0248	6.5400e-003	1.6000e-004	6.6900e-003		22.9364	22.9364	6.6000e-004		22.9529
Total	**0.0118**	**7.5700e-003**	**0.0748**	**2.3000e-004**	**0.0246**	**1.7000e-004**	**0.0248**	**6.5400e-003**	**1.6000e-004**	**6.6900e-003**		**22.9364**	**22.9364**	**6.6000e-004**		**22.9529**

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	lb/day										lb/day					
Archit. Coating	3.7337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**3.7931**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.5 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
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
Worker	0.0118	7.5700e-003	0.0748	2.3000e-004	0.0246	1.7000e-004	0.0248	6.5400e-003	1.6000e-004	6.6900e-003		22.9364	22.9364	6.6000e-004		22.9529
Total	**0.0118**	**7.5700e-003**	**0.0748**	**2.3000e-004**	**0.0246**	**1.7000e-004**	**0.0248**	**6.5400e-003**	**1.6000e-004**	**6.6900e-003**		**22.9364**	**22.9364**	**6.6000e-004**		**22.9529**

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	lb/day										lb/day					
Mitigated	0.1794	0.7583	2.0106	6.7100e-003	0.6081	5.7500e-003	0.6138	0.1625	5.3700e-003	0.1679		682.6550	682.6550	0.0372		683.5844
Unmitigated	0.1794	0.7583	2.0106	6.7100e-003	0.6081	5.7500e-003	0.6138	0.1625	5.3700e-003	0.1679		682.6550	682.6550	0.0372		683.5844

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	120.00	29.52	12.60	219,215	219,215
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	120.00	29.52	12.60	219,215	219,215

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Other Asphalt Surfaces	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

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	lb/day										lb/day					
NaturalGas Mitigated	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559
NaturalGas Unmitigated	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559

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	lb/day										lb/day					
General Office Building	663.781	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.1600e-003**	**0.0651**	**0.0547**	**3.9000e-004**		**4.9500e-003**	**4.9500e-003**		**4.9500e-003**	**4.9500e-003**		**78.0919**	**78.0919**	**1.5000e-003**	**1.4300e-003**	**78.5559**

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	lb/day										lb/day					
General Office Building	0.663781	7.1600e-003	0.0651	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003		78.0919	78.0919	1.5000e-003	1.4300e-003	78.5559
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.1600e-003**	**0.0651**	**0.0547**	**3.9000e-004**		**4.9500e-003**	**4.9500e-003**		**4.9500e-003**	**4.9500e-003**		**78.0919**	**78.0919**	**1.5000e-003**	**1.4300e-003**	**78.5559**

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	lb/day										lb/day					
Mitigated	0.2888	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003
Unmitigated	0.2888	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2651					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003
Total	**0.2888**	**1.0000e-005**	**1.2800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.7400e-003**	**2.7400e-003**	**1.0000e-005**		**2.9300e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2651					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.7400e-003	2.7400e-003	1.0000e-005		2.9300e-003
Total	**0.2888**	**1.0000e-005**	**1.2800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.7400e-003**	**2.7400e-003**	**1.0000e-005**		**2.9300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Jamacha Office Building

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	12.00	1000sqft	1.08	12,000.00	0
Other Asphalt Surfaces	0.54	Acre	0.54	23,522.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	556.22	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 33% RPS

Land Use - Project description

Construction Phase - Project description

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Plus water truck

Off-road Equipment -

Grading - Site grading

Architectural Coating - Rule 67.0.1 coatings

Vehicle Trips - SANDAG

Area Coating - Rule 67.0.1 coatings

Energy Use -

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - Tier 3 equipment

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	23.00
tblConstructionPhase	NumDays	200.00	154.00
tblConstructionPhase	NumDays	4.00	21.00
tblConstructionPhase	NumDays	10.00	86.00

tblGrading	AcresOfGrading	7.88	1.08
tblLandUse	LotAcreage	0.28	1.08
tblOffRoadEquipment	HorsePower	402.00	250.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	720.49	556.22
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblSequestration	NumberOfNewTrees	0.00	39.00
tblVehicleTrips	WD_TR	11.03	10.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2445	1.6399	1.5423	2.8100e-003	0.0653	0.0800	0.1453	0.0308	0.0761	0.1069	0.0000	238.3477	238.3477	0.0491	0.0000	239.5748
Maximum	**0.2445**	**1.6399**	**1.5423**	**2.8100e-003**	**0.0653**	**0.0800**	**0.1453**	**0.0308**	**0.0761**	**0.1069**	**0.0000**	**238.3477**	**238.3477**	**0.0491**	**0.0000**	**239.5748**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1207	1.3962	1.6702	2.8100e-003	0.0360	0.0790	0.1151	0.0149	0.0790	0.0939	0.0000	238.3475	238.3475	0.0491	0.0000	239.5745
Maximum	**0.1207**	**1.3962**	**1.6702**	**2.8100e-003**	**0.0360**	**0.0790**	**0.1151**	**0.0149**	**0.0790**	**0.0939**	**0.0000**	**238.3475**	**238.3475**	**0.0491**	**0.0000**	**239.5745**

	ROG	NOx	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	**50.62**	**14.86**	**-8.30**	**0.00**	**44.83**	**1.18**	**20.80**	**51.75**	**-3.84**	**12.18**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.3989	0.2750
2	4-1-2021	6-30-2021	0.5395	0.4461
3	7-1-2021	9-30-2021	0.5309	0.4412
		Highest	0.5395	0.4461

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0527	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004
Energy	1.3100e-003	0.0119	9.9800e-003	7.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004	0.0000	53.6195	53.6195	1.8600e-003	5.3000e-004	53.8237
Mobile	0.0243	0.1059	0.2761	9.4000e-004	0.0826	8.0000e-004	0.0834	0.0221	7.4000e-004	0.0229	0.0000	87.0090	87.0090	4.6400e-003	0.0000	87.1249
Waste						0.0000	0.0000		0.0000	0.0000	2.2654	0.0000	2.2654	0.1339	0.0000	5.6124
Water						0.0000	0.0000		0.0000	0.0000	0.6766	10.6707	11.3474	0.0699	1.7200e-003	13.6072
Total	**0.0783**	**0.1178**	**0.2862**	**1.0100e-003**	**0.0826**	**1.7000e-003**	**0.0843**	**0.0221**	**1.6400e-003**	**0.0238**	**2.9420**	**151.2994**	**154.2414**	**0.2103**	**2.2500e-003**	**160.1684**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0527	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004
Energy	1.3100e-003	0.0119	9.9800e-003	7.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004	0.0000	53.6195	53.6195	1.8600e-003	5.3000e-004	53.8237
Mobile	0.0243	0.1059	0.2761	9.4000e-004	0.0826	8.0000e-004	0.0834	0.0221	7.4000e-004	0.0229	0.0000	87.0090	87.0090	4.6400e-003	0.0000	87.1249
Waste						0.0000	0.0000		0.0000	0.0000	1.8123	0.0000	1.8123	0.1071	0.0000	4.4899
Water						0.0000	0.0000		0.0000	0.0000	0.5413	9.0459	9.5872	0.0560	1.3800e-003	11.3967
Total	**0.0783**	**0.1178**	**0.2862**	**1.0100e-003**	**0.0826**	**1.7000e-003**	**0.0843**	**0.0221**	**1.6400e-003**	**0.0238**	**2.3536**	**149.6746**	**152.0282**	**0.1696**	**1.9100e-003**	**156.8354**

	ROG	NOx	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**	**20.00**	**1.07**	**1.43**	**19.37**	**15.11**	**2.08**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	27.6120
Vegetation Land Change	-15.4440
Total	**12.1680**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	1/31/2021	5	21	
2	Paving	Paving	2/1/2021	5/31/2021	5	86	
3	Building Construction	Building Construction	5/1/2021	12/2/2021	5	154	
4	Architectural Coating	Architectural Coating	12/1/2021	12/31/2021	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.08

Acres of Paving: 0.54

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 18,000; Non-Residential Outdoor: 6,000; Striped Parking Area: 1,411 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	6.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	250	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	14.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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					0.0480	0.0000	0.0480	0.0261	0.0000	0.0261	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0179	0.1876	0.0902	2.3000e-004		8.1400e-003	8.1400e-003		7.4900e-003	7.4900e-003	0.0000	20.5071	20.5071	6.6300e-003	0.0000	20.6729
Total	**0.0179**	**0.1876**	**0.0902**	**2.3000e-004**	**0.0480**	**8.1400e-003**	**0.0561**	**0.0261**	**7.4900e-003**	**0.0336**	**0.0000**	**20.5071**	**20.5071**	**6.6300e-003**	**0.0000**	**20.6729**

3.2 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.6000e-004	2.6200e-003	1.0000e-005	8.4000e-004	1.0000e-005	8.5000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7356	0.7356	2.0000e-005	0.0000	0.7361
Total	**3.6000e-004**	**2.6000e-004**	**2.6200e-003**	**1.0000e-005**	**8.4000e-004**	**1.0000e-005**	**8.5000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.7356**	**0.7356**	**2.0000e-005**	**0.0000**	**0.7361**

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					0.0187	0.0000	0.0187	0.0102	0.0000	0.0102	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7300e-003	0.1133	0.1306	2.3000e-004		4.8100e-003	4.8100e-003		4.8100e-003	4.8100e-003	0.0000	20.5071	20.5071	6.6300e-003	0.0000	20.6729
Total	**5.7300e-003**	**0.1133**	**0.1306**	**2.3000e-004**	**0.0187**	**4.8100e-003**	**0.0235**	**0.0102**	**4.8100e-003**	**0.0150**	**0.0000**	**20.5071**	**20.5071**	**6.6300e-003**	**0.0000**	**20.6729**

3.2 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.6000e-004	2.6200e-003	1.0000e-005	8.4000e-004	1.0000e-005	8.5000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7356	0.7356	2.0000e-005	0.0000	0.7361
Total	**3.6000e-004**	**2.6000e-004**	**2.6200e-003**	**1.0000e-005**	**8.4000e-004**	**1.0000e-005**	**8.5000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.7356**	**0.7356**	**2.0000e-005**	**0.0000**	**0.7361**

3.3 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	0.0333	0.3329	0.3809	5.8000e-004		0.0179	0.0179		0.0165	0.0165	0.0000	50.5894	50.5894	0.0160	0.0000	50.9903
Paving	7.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0340**	**0.3329**	**0.3809**	**5.8000e-004**		**0.0179**	**0.0179**		**0.0165**	**0.0165**	**0.0000**	**50.5894**	**50.5894**	**0.0160**	**0.0000**	**50.9903**

3.3 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9400e-003	1.3900e-003	0.0140	4.0000e-005	4.4800e-003	3.0000e-005	4.5100e-003	1.1900e-003	3.0000e-005	1.2200e-003	0.0000	3.9159	3.9159	1.1000e-004	0.0000	3.9187
Total	**1.9400e-003**	**1.3900e-003**	**0.0140**	**4.0000e-005**	**4.4800e-003**	**3.0000e-005**	**4.5100e-003**	**1.1900e-003**	**3.0000e-005**	**1.2200e-003**	**0.0000**	**3.9159**	**3.9159**	**1.1000e-004**	**0.0000**	**3.9187**

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	0.0137	0.2855	0.4236	5.8000e-004		0.0166	0.0166		0.0166	0.0166	0.0000	50.5893	50.5893	0.0160	0.0000	50.9903
Paving	7.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0145**	**0.2855**	**0.4236**	**5.8000e-004**		**0.0166**	**0.0166**		**0.0166**	**0.0166**	**0.0000**	**50.5893**	**50.5893**	**0.0160**	**0.0000**	**50.9903**

3.3 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9400e-003	1.3900e-003	0.0140	4.0000e-005	4.4800e-003	3.0000e-005	4.5100e-003	1.1900e-003	3.0000e-005	1.2200e-003	0.0000	3.9159	3.9159	1.1000e-004	0.0000	3.9187
Total	**1.9400e-003**	**1.3900e-003**	**0.0140**	**4.0000e-005**	**4.4800e-003**	**3.0000e-005**	**4.5100e-003**	**1.1900e-003**	**3.0000e-005**	**1.2200e-003**	**0.0000**	**3.9159**	**3.9159**	**1.1000e-004**	**0.0000**	**3.9187**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1396	1.0500	0.9933	1.7000e-003		0.0527	0.0527		0.0509	0.0509	0.0000	139.7917	139.7917	0.0250	0.0000	140.4156
Total	**0.1396**	**1.0500**	**0.9933**	**1.7000e-003**		**0.0527**	**0.0527**		**0.0509**	**0.0509**	**0.0000**	**139.7917**	**139.7917**	**0.0250**	**0.0000**	**140.4156**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4300e-003	0.0475	0.0127	1.2000e-004	3.0700e-003	1.0000e-004	3.1700e-003	8.9000e-004	1.0000e-004	9.8000e-004	0.0000	12.0785	12.0785	9.0000e-004	0.0000	12.1009
Worker	3.7500e-003	2.6700e-003	0.0269	8.0000e-005	8.6400e-003	6.0000e-005	8.7100e-003	2.3000e-003	6.0000e-005	2.3500e-003	0.0000	7.5516	7.5516	2.2000e-004	0.0000	7.5570
Total	**5.1800e-003**	**0.0502**	**0.0396**	**2.0000e-004**	**0.0117**	**1.6000e-004**	**0.0119**	**3.1900e-003**	**1.6000e-004**	**3.3300e-003**	**0.0000**	**19.6302**	**19.6302**	**1.1200e-003**	**0.0000**	**19.6580**

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	0.0493	0.9299	1.0379	1.7000e-003		0.0563	0.0563		0.0563	0.0563	0.0000	139.7915	139.7915	0.0250	0.0000	140.4154
Total	**0.0493**	**0.9299**	**1.0379**	**1.7000e-003**		**0.0563**	**0.0563**		**0.0563**	**0.0563**	**0.0000**	**139.7915**	**139.7915**	**0.0250**	**0.0000**	**140.4154**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4300e-003	0.0475	0.0127	1.2000e-004	3.0700e-003	1.0000e-004	3.1700e-003	8.9000e-004	1.0000e-004	9.8000e-004	0.0000	12.0785	12.0785	9.0000e-004	0.0000	12.1009
Worker	3.7500e-003	2.6700e-003	0.0269	8.0000e-005	8.6400e-003	6.0000e-005	8.7100e-003	2.3000e-003	6.0000e-005	2.3500e-003	0.0000	7.5516	7.5516	2.2000e-004	0.0000	7.5570
Total	**5.1800e-003**	**0.0502**	**0.0396**	**2.0000e-004**	**0.0117**	**1.6000e-004**	**0.0119**	**3.1900e-003**	**1.6000e-004**	**3.3300e-003**	**0.0000**	**19.6302**	**19.6302**	**1.1200e-003**	**0.0000**	**19.6580**

3.5 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	0.0429					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5200e-003	0.0176	0.0209	3.0000e-005		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	2.9362	2.9362	2.0000e-004	0.0000	2.9413
Total	**0.0455**	**0.0176**	**0.0209**	**3.0000e-005**		**1.0800e-003**	**1.0800e-003**		**1.0800e-003**	**1.0800e-003**	**0.0000**	**2.9362**	**2.9362**	**2.0000e-004**	**0.0000**	**2.9413**

3.5 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	8.6000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2417	0.2417	1.0000e-005	0.0000	0.2419
Total	**1.2000e-004**	**9.0000e-005**	**8.6000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2417**	**0.2417**	**1.0000e-005**	**0.0000**	**0.2419**

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	0.0429					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8000e-004	0.0156	0.0211	3.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	2.9362	2.9362	2.0000e-004	0.0000	2.9413
Total	**0.0436**	**0.0156**	**0.0211**	**3.0000e-005**		**1.0900e-003**	**1.0900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**2.9362**	**2.9362**	**2.0000e-004**	**0.0000**	**2.9413**

3.5 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	8.6000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2417	0.2417	1.0000e-005	0.0000	0.2419
Total	**1.2000e-004**	**9.0000e-005**	**8.6000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2417**	**0.2417**	**1.0000e-005**	**0.0000**	**0.2419**

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	0.0243	0.1059	0.2761	9.4000e-004	0.0826	8.0000e-004	0.0834	0.0221	7.4000e-004	0.0229	0.0000	87.0090	87.0090	4.6400e-003	0.0000	87.1249
Unmitigated	0.0243	0.1059	0.2761	9.4000e-004	0.0826	8.0000e-004	0.0834	0.0221	7.4000e-004	0.0229	0.0000	87.0090	87.0090	4.6400e-003	0.0000	87.1249

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	120.00	29.52	12.60	219,215	219,215
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	120.00	29.52	12.60	219,215	219,215

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Other Asphalt Surfaces	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

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	40.6905	40.6905	1.6100e-003	2.9000e-004	40.8179
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	40.6905	40.6905	1.6100e-003	2.9000e-004	40.8179
NaturalGas Mitigated	1.3100e-003	0.0119	9.9800e-003	7.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004	0.0000	12.9290	12.9290	2.5000e-004	2.4000e-004	13.0058
NaturalGas Unmitigated	1.3100e-003	0.0119	9.9800e-003	7.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004	0.0000	12.9290	12.9290	2.5000e-004	2.4000e-004	13.0058

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	242280	1.3100e-003	0.0119	9.9800e-003	7.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004	0.0000	12.9290	12.9290	2.5000e-004	2.4000e-004	13.0058
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.3100e-003**	**0.0119**	**9.9800e-003**	**7.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**12.9290**	**12.9290**	**2.5000e-004**	**2.4000e-004**	**13.0058**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	242280	1.3100e-003	0.0119	9.9800e-003	7.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004	0.0000	12.9290	12.9290	2.5000e-004	2.4000e-004	13.0058
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.3100e-003**	**0.0119**	**9.9800e-003**	**7.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**12.9290**	**12.9290**	**2.5000e-004**	**2.4000e-004**	**13.0058**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	161280	40.6905	1.6100e-003	2.9000e-004	40.8179
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**40.6905**	**1.6100e-003**	**2.9000e-004**	**40.8179**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	161280	40.6905	1.6100e-003	2.9000e-004	40.8179
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**40.6905**	**1.6100e-003**	**2.9000e-004**	**40.8179**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0527	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004
Unmitigated	0.0527	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004
Total	**0.0527**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.4000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004
Total	**0.0527**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.5872	0.0560	1.3800e-003	11.3967
Unmitigated	11.3474	0.0699	1.7200e-003	13.6072

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	2.1328 / 1.3072	11.3474	0.0699	1.7200e-003	13.6072
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**11.3474**	**0.0699**	**1.7200e-003**	**13.6072**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.70624 / 1.22746	9.5872	0.0560	1.3800e-003	11.3967
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.5872**	**0.0560**	**1.3800e-003**	**11.3967**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.8123	0.1071	0.0000	4.4899
Unmitigated	2.2654	0.1339	0.0000	5.6124

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	11.16	2.2654	0.1339	0.0000	5.6124
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**2.2654**	**0.1339**	**0.0000**	**5.6124**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	8.928	1.8123	0.1071	0.0000	4.4899
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**1.8123**	**0.1071**	**0.0000**	**4.4899**

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

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	12.1680	0.0000	0.0000	12.1680

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Scrub	1.08 / 0	-15.4440	0.0000	0.0000	-15.4440
Total		**-15.4440**	**0.0000**	**0.0000**	**-15.4440**

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	39	27.6120	0.0000	0.0000	27.6120
Total		**27.6120**	**0.0000**	**0.0000**	**27.6120**