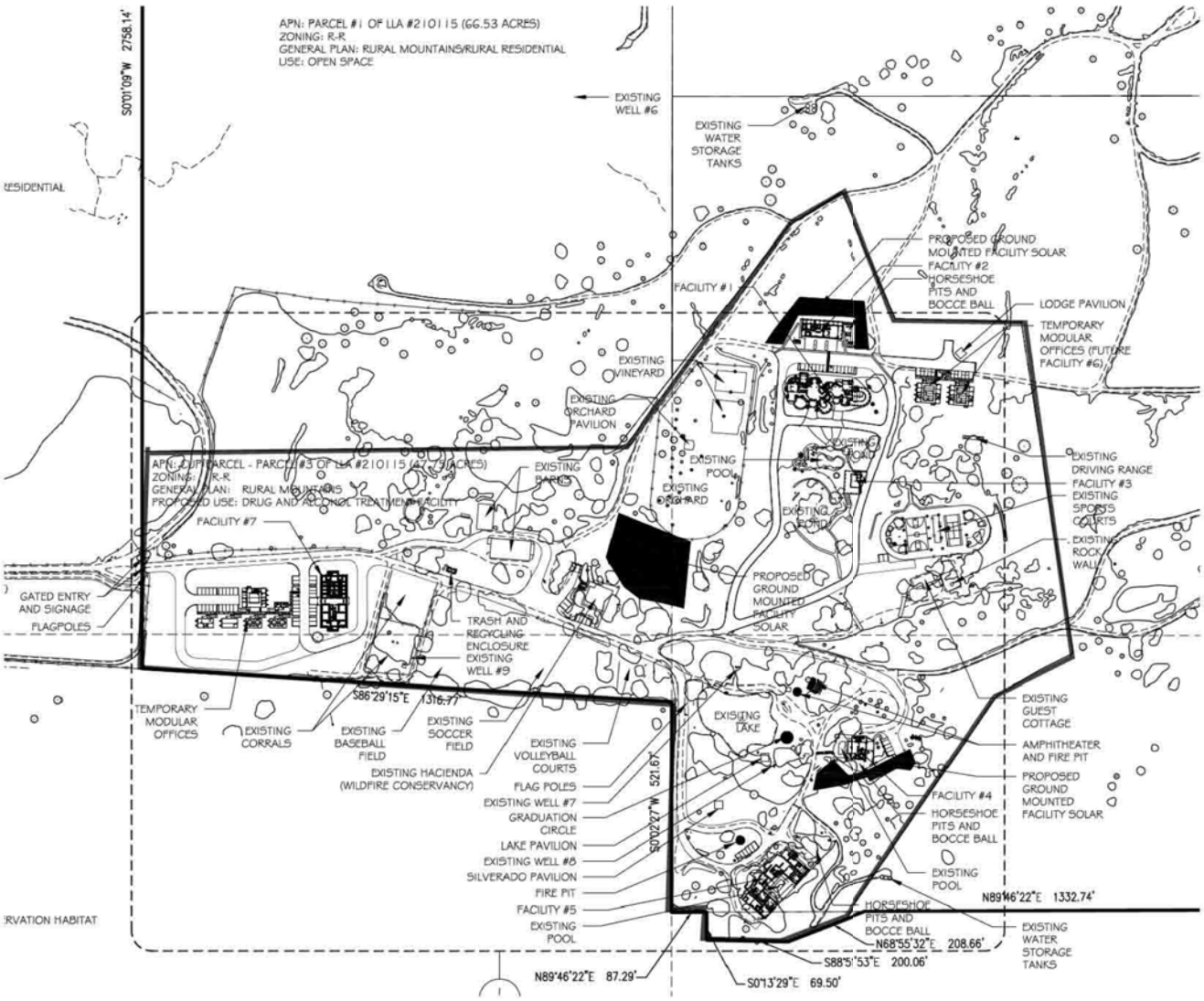
PARADISE VALLEY RANCH
AIR QUALITY AND GREENHOUSE GAS IMPACT STUDY
County of Riverside



PARADISE VALLEY RANCH
AIR QUALITY AND GREENHOUSE GAS IMPACT STUDY
County of Riverside, California

Prepared for:

Mr. Ken Jackson
PVR MANAGEMENT, LLC.
8895 Research Drive, Suite 200
Irvine, CA 92618

Prepared by:

RK ENGINEERING GROUP, INC.
4000 Westerly Place, Suite 280
Newport Beach, CA 92660

Bryan Estrada, AICP
Darshan Shivaiah, M.S.

July 23, 2021

Table of Contents

Section			Page
1.0	**Introduction**		**1-1**
	1.1	Site Location	1-1
	1.2	Project Description	1-2
	1.3	Sensitive Receptors	1-3
	1.4	Summary of Analysis Results	1-4
	1.5	Recommended Project Design Features	1-5
2.0	**Air Quality Setting**		**2-1**
	2.1	Description of Air Pollutants	2-1
	2.2	Federal and State Ambient Air Quality Standards	2-4
	2.3	Attainment Status	2-6
	2.4	South Coast Air Quality Management District (SCAQMD)	2-7
	2.5	South Coast Air Basin	2-9
	2.6	Local Climate and Meteorology	2-10
	2.7	Local Air Quality	2-11
3.0	**Global Climate Change Setting**		**3-1**
	3.1	Greenhouse Gases	3-2
	3.2	GHG Regulatory Setting - International	3-4
	3.3	GHG Regulatory Setting – National	3-5
	3.4	GHG Regulatory Setting – State of California	3-6
	3.5	GHG Emissions Inventory	3-7
4.0	**Modeling Parameters and Assumptions**		**4-1**
	4.1	Emissions Modeling Overview	4-1
	4.2	Construction Assumptions	4-2
	4.3	Localized Construction Analysis Modeling Parameters	4-3
	4.4	Operational Assumptions	4-4
		4.4.1 Mobile Source Emissions	4-4
		4.4.2 Energy Source Emissions	4-6
		4.4.3 Area Source Emissions	4-7
		4.4.4 Other Sources of Operational Emissions	4-7
5.0	**Significance Thresholds**		**5-1**
	5.1	Air Quality Regional Significance Thresholds	5-1
	5.2	Air Quality Localized Significance Thresholds	5-1
	5.3	Riverside County General Plan Air Quality Element	5-2
	5.4	Riverside County Climate Action Plan and GHG Significance Thresholds	5-2

Table of Contents (continued)

Section			Page
6.0	**Air Quality Impact Analysis**		**6-1**
	6.1	Short-Term Air Quality Impacts - Construction	6-1
		6.1.1 Regional Emissions - Construction	6-1
		6.1.2 Localized Emissions - Construction	6-2
		6.1.3 Fugitive Dust - Construction	6-3
		6.1.4 Odors - Construction	6-4
		6.1.5 Asbestos - Construction	6-4
		6.1.6 Diesel Particulate Matter - Construction	6-5
		6.1.7 Lead Renovation, Repair and Painting - Construction	6-6
	6.2	Long Terms Air Quality Impacts - Operation	6-6
		6.2.1 Regional Emissions - Operation	6-6
		6.2.2 Localized Operational Emissions - Operation	6-7
		6.2.3 Odors – Operation	6-8
		6.2.4 Toxic Air Contaminants – Operation	6-8
	6.3	CO Hot Spot Emissions	6-9
	6.4	SCAQMD Air Quality Management Plan Consistency	6-10
		6.4.1 Criteria 1 – Increase in the Frequency or Severity of Violations	6-10
		6.4.2 Criteria 2 – Exceed assumptions in the AQMP	6-11
7.0	**Greenhouse Gas Impact Analysis**		**7-1**
	7.1	Greenhouse Gas Emissions - Construction	7-1
	7.2	Greenhouse Gas Emissions - Operation	7-2
	7.3	Riverside County Climate Action Plan	7-2
8.0	**References**		**8-1**

List of Attachments

Exhibits

Location Map ..... A
Site Plan ..... B

Tables

Land Use Summary 1
CEQA Air Quality Impact Criteria 2
CEQA GHG Impact Criteria 3
Federal and State Ambient Air Quality Standards (AAQS) 4
South Coast Air Basin Attainment Status 5
Meteorological Summary 6
Local Air Quality 7
Global Warming Potential of Greenhouse Gases 8
GHG Emissions Inventory 9
Construction Equipment Assumptions Phase 10
Operational Vehicle Miles Traveled 11
Vehicle Mix for Trips 12
Electricity and Natural Gas Usage 13
Operational Water Usage and Waste Generation 14
SCAQMD Regional Significance Thresholds 15
SCAQMD Localized Significance Thresholds 16
Regional Construction Emissions 17
Localized Construction Emissions 18
Regional Operational Emissions 19
Localized Operational Emissions 20
Construction Greenhouse Gas Emissions 21
Operational Greenhouse Gas Emissions 22

Appendices

Daily Emission Calculation Outputs (CalEEMod) ..... A
Annual Emission Calculation Outputs (CalEEMod) ..... B

1.0 Introduction

The purpose of this air quality and greenhouse gas (GHG) analysis is to determine whether the estimated criteria air pollutants and greenhouse gas emissions generated from the construction and operation of the proposed Paradise Valley Ranch (project) would cause significant impacts to air resources.

This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the California Air Resources Board (CARB), South Coast Air Quality Management District (SCAQMD), and the Riverside County recommendations for quantification of emissions and evaluation of potential impacts.

1.1 Site Location

The project site is located in an unincorporated area of southwest Riverside County, east of the City of Hemet, approximately 4 miles east of State Street, at the terminus of Cactus Valley Road. The site address is 43700 Cactus Valley Road. Currently, the County of Riverside is processing a Lot Line Adjustment (LLA) involving three parcels [Assessor Parcel Numbers (APN) 569-020-024, -025, and -026] on the Paradise Valley Ranch property. Once this LLA has been processed (LLA210115), one of the three parcels (approximately 48-acres) will be used for Conditional Use Permit No. 210005.

The project site has been in operation for over 40 years serving as a Christian retreat and youth camp. The site is zoned for Rural Residential (RR) uses in the County of Riverside Zoning Map and Rural Residential (RR) and Rural Mountainous (RM) in the Riverside County Land Use Map.

Existing land uses surrounding the project site include; Rural Residential and Rural Mountainous use to the north and west, Rural Residential and Open Space Rural to the east and Rural Residential and Conservation Habitat to the south.

The project site is located within the South Coast Air Basin (SCAB) and SCAQMD's Hemet/Elsinore General Forecast area and the Hemet/San Jacinto Valley Monitoring Area-28.

The project location map is provided in Exhibit A.

1.2 Project Description

The project consists of re-developing the existing Paradise Valley Ranch site to become the Wildfire Conservancy "Center of Excellence" west-coast facility. The facility will be dedicated to the treatment and recovery of mental and behavioral health conditions suffered by firefighters. The site will support research and training programs in partnership with the California State University system, CAL FIRE, CAL FIRE Local 2881, and the International Association of Fire Fighters (IAFF), among others. The project is expected to have 77 employees on-site.

The project is also proposing to develop approximately 55,236 sqaure feet of land for private photovoltaic energy development. The total project site area is approximately 48 acres.

Construction of the project is estimated to begin in the year 2021 and expected to last approximately 15 months. Approximately 37,130 square feet of new building area will be constructed as part of the project. The project is not expected to require the import or export of earthwork material.

Once operational, the total building area of the project would be approximately 69,146 square feet and include approximately 112 beds. Existing on-site amenities, which will remain operational include: 3 pools, 2 man-made lakes, pool house, gym, rock-climbing wall, basketball/tennis court, batting cages, barn and horse stables, and hiking trails/roads.

Table 1 provides a summary of the project land uses and building area.

The site plan used for this analysis, provided by JW ARCHITECTS, is illustrated in Exhibit B.

It should be noted that this analysis was originally conducted with the assumption that the project would include approximately 51.4 acres of utility-scale solar facilities. The utility-scale solar component is no longer part of the project. The project now includes only 55,236 square feet of private on-site solar facilities. However, to be conservative, the analysis still contains the emissions impacts associated with the full 51.4 acre solar facility. As a result, the analysis presents a worst case assessment of impacts.

Table 1
Land Use Summary

Land Use	Status	Quantity	Metric
Ponderosa Lodge	Existing	8,712	Square Feet
	New Construction	3,137	Square Feet
	Net Total	11,849	Square Feet
Silverado House	Existing	8,051	Square Feet
	New Construction	439	Square Feet
	Net Total	8,490	Square Feet
Barn/Equestrian Facility	Existing	4,350	Square Feet
Barn	Existing	2,560	Square Feet
Hacienda House	Existing	2,000	Square Feet
New Lodge	New Construction	16,777	Square Feet
New Admin Building	New Construction	16,777	Square Feet
Chaparral Lodge	Existing	2,160	Square Feet
Kitchen and Dining Room	Existing	2,400	Square Feet
Pool House	Existing	945	Square Feet
Guest Cottage	Existing	838	Square Feet
Ball Court	Existing	27,100	Square Feet
Rock Climbing Wall	Existing	315	Square Feet
Manmade Lake- 1	Existing	4,790	Square Feet
Manmade Lake-2	Existing	20,030	Square Feet
Pool 1	Existing	1,600	Square Feet
Pool 2	Existing	500	Square Feet
Pool 3	Existing	1,300	Square Feet
Private Solar Facilities	New Construction	55,236	Square Feet
Total Existing (Building Area)		**32,016**	**Square Feet**
Total New Construction (Building Area)		**37,130**	**Square Feet**
Total Future Building Area		**69,146**	**Square Feet**
Total Project Site Area		**48**	**Acres**

1.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, the SCAQMD considers a sensitive receptor to be a location where a sensitive

individual could remain for 24-hours or longer, such as residencies, hospitals, and schools (etc), as described in the Localized Significance Threshold Methodology (SCAQMD 2008a, page 3-2).

The nearest sensitive land uses are considered the residential uses located to the west, approximately 1,000 feet from the western property line of the project site.

1.4 Summary of Analysis Results

Tables 2 and 3 provide a summary of the Air Quality and Greenhouse Gas impact analysis results, per the 2019 CEQA Statute and Guidelines, Appendix G, Environmental Checklist Form.

Table 2
CEQA Air Quality Impact Criteria

Air Quality Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with, or obstruct implementation of, the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Table 3
CEQA GHG Impact Criteria

GHG Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

1.5 Recommended Project Design Features

The following recommended project design features include standard rules and requirements, best practices and recognized design features for reducing air quality and GHG emissions. Design features are assumed to be part of the conditions of approval for the project and integrated into the design.

Construction Design Features:

DF-1. The project must follow the standard SCAQMD rules and requirements with regards to fugitive dust control, which includes, but are not limited to the following:

1. All active construction areas shall be watered two (2) times daily.
2. Speed on unpaved roads shall be reduced to less than 15 mph.
3. Any visible dirt deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
4. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
5. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
6. Access points shall be washed or swept daily.
7. Construction sites shall be sandbagged for erosion control.
8. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).

9. Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.
10. Pave or gravel construction access roads at least 100 feet onto the site from the main road and use gravel aprons at truck exits.
11. Replace the ground cover of disturbed areas as quickly possible.
12. A fugitive dust control plan should be prepared and submitted to SCAQMD prior to the start of construction.

DF-2. Prepare and implement a Construction Management Plan which will include Best Available Control Measures to be submitted to the County of Riverside.

DF-3. Construction equipment shall be maintained in proper tune.

DF-4. All construction vehicles shall be prohibited from excessive idling. Excessive idling is defined as five (5) minutes or longer.

DF-5. Minimize the simultaneous operation of multiple construction equipment units.

DF-6. The use of heavy construction equipment and earthmoving activity shall be suspended during Air Alerts when the Air Quality Index reaches the "Unhealthy" level.

DF-7. Utilize low emission "clean diesel" equipment with new or modified Tier 4 engines that include diesel oxidation catalysts, diesel particulate filters or Moyer Program retrofits that meet CARB best available control technology, when feasible.

DF-8. Establish an electricity supply to the construction site and use electric powered equipment instead of diesel-powered equipment or generators, where feasible.

DF-9. Establish staging areas for the construction equipment that are as distant as possible from adjacent sensitive receptors (residential land uses).

DF-10. Use haul trucks with on-road engines instead of off-road engines for on-site hauling.

DF-11. Utilize zero VOC and low VOC paints and solvents, where feasible.

DF-12. A lead hazard evaluation should be performed prior to the demolition or occupancy of any structure on the project site built before 1978. If necessary,

a lead abatement plan and clearance inspection should be provided prior to occupancy.

Operational Design Features:

DF-13. Comply with the mandatory requirements of Title 24 part 11 of the California Building Standards Code (CALGreen) and the Title 24 Part 6 Building Efficiency Standards.

DF-14. Implement water conservation strategies, including low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.

DF-15. Comply with the mandatory requirements of CalRecycle's commercial recycling program and implement zero waste strategies.

DF-16. Provide the necessary infrastructure to support electric vehicle charging, as required by CALGreen.

DF-17. Use electric landscaping equipment, such as lawn mowers and leaf blowers, where feasible.

2.0 Air Quality Setting

The Federal Clean Air Act (§ 7602) defines air pollution as any agent or combination of such agents, including any physical, chemical, biological, or radioactive substance which is emitted into or otherwise enters the ambient air. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution. Air pollution can cause disease, allergies and death. It affects soil, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate. It can also cause damage to and deterioration of property, present hazards to transportation, and negatively impact the economy.

This section provides background information on criteria air pollutants, the applicable federal, state and local regulations concerning air pollution, and the existing physical setting of the project within the context of local air quality.

2.1 Description of Air Pollutants[1].

The following section describes the air pollutants of concern related to the project. Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health. The following descriptions of criteria air pollutants have been provided by the SCAQMD.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, and competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs in the body. The ambient air quality standard for carbon monoxide is intended to protect persons whose medical condition already compromises their circulatory system's ability to deliver oxygen. These medical conditions include certain heart ailments, chronic lung diseases, and anemia. Persons with these conditions have reduced exercise capacity even when exposed to relatively low levels of CO. Fetuses are at risk because their blood has an even greater affinity to bind with CO. Smokers are also at risk from ambient CO levels because smoking

[1] SCAQMD. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning (May 6, 2005)

increases the background level of CO in their blood. The South Coast basin has recently achieved attainment status for carbon monoxide by both USEPA and CARB.

- **Nitrogen Dioxide (NO_2)** is a byproduct of fuel combustion. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts quickly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in young children has also been observed at concentrations below 0.3 parts per million (ppm). NO_2 absorbs blue light which results in a brownish red cast to the atmosphere and reduced visibility. Although NO_2 concentrations have not exceeded national standards since 1991 and the state hourly standard since 1993, NO_x emissions remain of concern because of their contribution to the formation of O3 and particulate matter.

- **Ozone (O_3)** is one of a number of substances called photochemical oxidants that are formed when volatile organic compounds (VOC) and NO_x react in the presence of ultraviolet sunlight. O_3 concentrations in the South Coast basin are typically among the highest in the nation, and the damaging effects of photochemical smog, which is a popular name for a number of oxidants in combination, are generally related to the concentrations of O_3. Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the subgroups most susceptible to O_3 effects. Short-term exposures (lasting for a few hours) to O_3 at levels typically observed in southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. The South Coast Air Basin is designated by the USEPA as an extreme non-attainment area for ozone. Although O_3 concentrations have declined substantially since the early 1990s, the South Coast basin continues to have peak O_3 levels that exceed both state and federal standards.

- **Fine Particulate Matter (PM_{10})** consists of extremely small suspended particles or droplets 10 microns or smaller in diameter that can lodge in the lungs, contributing to respiratory problems. PM_{10} arises from such sources as re-entrained road dust, diesel soot, combustion products, tire and brake abrasion, construction operations, and fires. It is also formed in the atmosphere from NO_x and SO_2 reactions with ammonia. PM_{10} scatters light and significantly reduces visibility. Inhalable particulates

pose a serious health hazard, alone or in combination with other pollutants. More than half of the smallest particles inhaled will be deposited in the lungs and can cause permanent lung damage. Inhalable particulates can also have a damaging effect on health by interfering with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance. The South Coast basin has recently achieved federal attainment status for PM_{10}, but is non-attainment based on state requirements.

- **Ultra-Fine Particulate Matter ($PM_{2.5}$)** is defined as particulate matter with a diameter less than 2.5 microns and is a subset of PM_{10}. $PM_{2.5}$ consists mostly of products from the reaction of NO_x and SO_2 with ammonia, secondary organics, finer dust particles, and the combustion of fuels, including diesel soot. $PM_{2.5}$ can cause exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease, declines in pulmonary function growth in children, and increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in $PM_{2.5}$ levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma. The South Coast basin is designated as non-attainment for $PM_{2.5}$ by both federal and state standards.

- **Sulfur dioxide (SO_2)** is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children. Individuals with asthma may experience constriction of airways with exposure to SO_2. Though SO_2 concentrations have been reduced to levels well below state and federal standards, further reductions in SO_2 emissions are needed because SO_2 is a precursor to sulfate and PM_{10}. The South Coast basin is considered a SO_2 attainment area by USEPA and CARB.

- **Lead (Pb)** is a toxic heavy metal that can be emitted into the air through some industrial processes, burning of leaded gasoline and past use of lead-based consumer products. Lead is a neurotoxin that accumulates in soft tissues and bones, damages the nervous system, and causes blood disorders. It is particularly problematic in children, in that permanent brain damage may result, even if blood levels are promptly normalized with treatment. Concentrations of lead once exceeded the state and federal air quality standards by a wide margin, but as a result of the removal of lead from motor vehicle gasoline, ambient air quality standards for lead have not been exceeded since 1982. Though special monitoring sites immediately downwind of lead sources recorded localized violations of the state standard in 1994, no violations have been recorded since. Consequently, the South Coast basin is designated as an attainment area for lead by both the USEPA and CARB. This report

does not analyze lead emissions from the project, as it is not expected to emit lead in any significant measurable quantity.

- **Volatile Organic Compounds (VOC),** although not actually a criteria air pollutant, VOCs are regulated by the SCAQMD because they cause chemical reactions which contribute to the formation of ozone. VOCs are also transformed into organic aerosols in the atmosphere, contributing to higher PM_{10} and lower visibility levels. Sources of VOCs include combustion engines, and evaporative emissions associated with fuel, paints and solvents, asphalt paving, and the use of household consumer products such as aerosols. Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOC. Some hydrocarbon components classified as VOC emissions are hazardous air pollutants. Benzene, for example, is a hydrocarbon component of VOC emissions that are known to be a human carcinogen. The term reactive organic gases (ROG) are often used interchangeably with VOC.

- **Toxic Air Contaminants (TACs)** are defined as air pollutants which may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health, and for which there is no concentration that does not present some risk. This contrasts with the criteria pollutants, in that there is no threshold level for TAC exposure below which adverse health impacts are not expected to occur. The majority of the estimated health risk from TACs can be attributed to a relatively few compounds, the most common being diesel particulate matter (DPM). In addition to DPM, benzene and 1,3-butadiene are also significant contributors to overall ambient public health risk in California.

2.2 Federal and State Ambient Air Quality Standards

The Federal Clean Air Act, which was last amended in 1990, requires the EPA to set National Ambient Air Quality Standards (NAAQS) for criteria pollutants considered harmful to public health and the environment. The State of California has also established additional and more stringent California Ambient Air Quality Standards (CAAQS) in addition to the seven criteria pollutants designated by the federal government.

AAQS are designed to protect the health and welfare of the populace with a reasonable margin of safety. The standards are divided into two categories, primary standards and secondary standards. Primary standards are implemented to provide protection for the "sensitive" populations such as those with asthma, or the children and elderly. Secondary standards are to provide protection against visible pollution as well as damage to the surrounding environment, including animals, crops, and buildings.

Table 4 shows the Federal and State Ambient Air Quality Standards.

Table 4
Federal and State Ambient Air Quality Standards (AAQS)[1]

Air Pollutant	Averaging Time [2]	Federal Standard (NAAQS)[2]	California Standard (CAAQS)[2]
Ozone	1 Hour	--	0.09 ppm
	8 Hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	1 Hour	35 ppm	20 ppm
	8 Hour	9 ppm	9 ppm
Nitrogen Dioxide (NO_2)	1 Hour	0.100 ppm	0.18 ppm
	Annual	0.053 ppm	0.030 ppm
Sulfur Dioxide (SO_2)	1 Hour	0.075 ppm	0.25 ppm
	3 Hour	0.5 ppm[3]	--
	24 Hour	--	0.04 ppm
Particulate Matter (PM_{10})	24 Hour	150 $\mu g/m^3$	50 $\mu g/m^3$
	Mean	--	20 $\mu g/m^3$
Particulate Matter (PM2.5)	24 Hour	35 $\mu g/m^3$	--
	Annual	12 $\mu g/m^3$	12 $\mu g/m^3$
Lead	30-day	--	1.5 $\mu g/m$
	Quarter	1.5 $\mu g/m$	--
	3-month average	0.15 $\mu g/m$	--
Visibility reducing particles	8 Hour	--	0.23/km extinction coefficient. (10-mile visibility standard)
Sulfates	24 Hour	--	25 $\mu g/m$
Vinyl chloride	24 Hour	--	0.01 ppm
Hydrogen sulfide	24 Hour	--	0.03 ppm

[1] Source: USEPA: https://www.epa.gov/criteria-air-pollutants/naaqs-table and
CARB: https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards

[2] ppm = parts per million of air, by volume; µg/m3 = micrograms per cubic meter; Annual = Annual Arithmetic Mean; 30-day = 30-day average; Quarter = Calendar quarter.

[3] Secondary standard

Several pollutants listed in Table 4 are not addressed in this analysis. Lead is not included because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

2.3 Attainment Status

The Clean Air Act requires states to prepare a State Implementation Plan (SIP) to ensure air quality meets the NAAQS. The California Air Resources Board (CARB) provides designations of attainment for air basins where AAQS are either met or exceeded. If the AAQS are met, the area is designated as being in "attainment", if the air pollutant concentrations exceed the AAQS, than the area is designated as being "nonattainment". If there is inadequate or inconclusive data to make a definitive attainment designation, the area is considered "unclassified."

National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

When a state submits a request to the EPA to re-designate a nonattainment area to attainment, the Clean Air Act (CAA) section 175A(a) requires that the state (or states, if the area is a multi-state area) submit a maintenance plan ensuring the area can maintain the air quality standard for which the area is to be re-designated for at least 10 years following the effective date of re-designation.

Table 5 lists the attainment status for the criteria pollutants in the South Coast Air Basin (SCAB).

Table 5
South Coast Air Basin Attainment Status[1]

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment (Extreme)[2]
Carbon monoxide	Attainment	Attainment (Maintenance)
Nitrogen dioxide	Attainment	Attainment (Maintenance)
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Attainment	Nonattainment (Partial)[3]

[1] Source: California Air Resources Board. http://www.arb.ca.gov/desig/adm/adm.htm
[2] 8-Hour Ozone.
[2] Partial Nonattainment designation – Los Angeles County portion of Basin only.

2.4 South Coast Air Quality Management District (SCAQMD)

The agency responsible for air pollution control for the South Coast Air Basin (SCAB) is the South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the SCAB. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the SCAB. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air SCAB where one or more ambient air quality standards are exceeded.

Every three (3) years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The latest version is the 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air. While air quality has dramatically improved over the years, the SCAB still exceeds federal public health standards for both ozone and particulate matter (PM) and experiences some of the worst air pollution in the nation. The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the NAAQS are not met on time.

The most significant air quality challenge in the SCAB is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. Based on the inventory and modeling results, 522 tons per day (tpd) of total SCAB NOx 2012 emissions are projected to drop to 255 tpd and 214 tpd in the 8-hour ozone attainment years of 2023 and 2031 respectively, due to continued implementation of already adopted regulatory actions ("baseline emissions"). The analysis suggests that total SCAB emissions of NOx must be reduced to approximately 141 tpd in 2023 and 96 tpd in 2031 to attain the 8-hour ozone standards. This represents an additional 45 percent reduction in NOx in 2023, and an additional 55 percent NOx reduction beyond 2031 levels.[2]

The SCAQMD establishes a program of rules and regulations to obtain attainment of the state and federal standards in conjunction with the AQMP. Several of the rules and regulations that may be applicable to this project include, but are not limited to, the following:

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

SCAQMD Rule 445 restricts wood burning devices from being installed into any new development and is intended to reduce the emissions of particulate matter for wood burning devices.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of project must comply with Rule 1113.

[2] http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf

SCAQMD Rule 1143 governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

SCAQMD Rule 1186 limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

SCAQMD Rule 1303 governs the permitting of re-located or new major emission sources, requiring Best Available Control Measures and setting significance limits for PM10 among other pollutants.

SCAQMD Rule 2202 On-Road Motor Vehicle Mitigation Options, is to provide employers with a menu of options to reduce mobile source emissions generated from employee commutes, to comply with federal and state Clean Air Act requirements, Health & Safety Code Section 40458, and Section 182(d)(1)(B) of the federal Clean Air Act. It applies to any employer who employs 250 or more employees on a full or part-time basis at a worksite for a consecutive six-month period calculated as a monthly average.

2.5 South Coast Air Basin

The project is located within the South Coast Air SCAB (SCAB). To the west of the SCAB is the Pacific Ocean. To the north and east are the San Gabriel, San Bernardino, and San Jacinto mountains, while the southern limit of the SCAB is the San Diego County line. The SCAB consists of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County.

The local dominant wind blows predominantly from the south-southwest with relatively low velocities. The annual average annual wind speed is about 10 miles per hour. Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion limit the vertical dispersion of air pollutants throughout the SCAB.

The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows

from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the SCAB, ranging from the low to middle 60s (°F). With more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal regions and Los Angeles metropolitan area are transported inland until reaching the mountains, where the combination of mountains and temperature inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas of the SCAB. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows.

Temperature inversions are an important feature that limits the vertical depth through which pollution can be mixed. During the summer, coastal areas are characterized by a sharp discontinuity between the cool marine air at the surface and the warm, sinking air aloft within the high-pressure cell over the ocean to the west. This marine/subsidence inversion allows for good local mixing, but acts like a giant lid over the SCAB. The air remains stagnant, as the average wind speed in downtown Los Angeles becomes less than five mph.

The second type of inversion forms on clear winter nights when cold air off the mountains sinks to the valley floor while the air aloft over the valley remains warm. This forms radiation inversions. These inversions, in conjunction with calm winds, trap pollutants such as those from automobile exhaust near their source. They lead to air pollution "hotspots" in heavily developed coastal areas of the SCAB, although onshore breezes often push the pollutants along canyons into the inland valleys. Summers are often periods of hazy visibility and occasionally unhealthful air, while winter air quality impacts tend to be highly localized and can consist of elevated levels of nitrogen dioxide and fine particulate matter.

2.6 Local Climate and Meteorology

The weather station closest to the project site is a National Weather Service Cooperative weather station located at Hemet (043896). Climatological data from the National Weather Service at this station is summarized in Table 6.

Table 6
Meteorological Summary[1]

Month	Temperature (˚F)			Mean Precipitation (inches)
	Max.	Min.	Mean	
January	69.1	38.3	53.7	2.31
February	67.7	39.3	53.5	2.20
March	72.8	41.9	57.4	1.78
April	76.3	45.0	60.6	0.90
May	84.6	50.5	67.5	0.31
June	91.8	55.4	73.6	0.05
July	98.4	60.9	79.7	0.16
August	98.9	61.2	80.0	0.24
September	94.6	58.1	76.4	0.40
October	84.3	50.2	67.3	0.50
November	74.1	42.2	58.2	1.02
December	67.7	37.3	52.5	1.45
Annual	**81.7**	**48.4**	**65.0**	**11.32**

[1] Source: Western Regional Climate Center 2012. Averages derived from measurements recorded between 1917 and 2012 at Hemet, (043896).

2.7 Local Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Basin provided in the Final 2016 Air Quality Management Plan, prepared by SCAQMD, March 2017, indicate that collectively, mobile sources account for 60 percent of the VOC, 90 percent of the NOx emissions, 95 percent of the CO emissions and 34 percent of directly emitted PM2.5, with another 13 percent of PM2.5 from road dust.

The SCAQMD has divided the SCAB into fourteen general forecasting areas and thirty-eight Source Receptor Areas (SRA) for monitoring and reporting local air quality. The SCAQMD provides daily reports of the current air quality conditions in each general forecast area and SRA. The monitoring areas provide a general representation of the local meteorological, terrain, and air quality conditions within the SCAB.

The project is located within Hemet/ San Jacinto Valley (SRA-28). Since 1997, there has been no active monitoring station in Area 28 because information gathered in Area 28 was consistently redundant with information gathered in Area 24 – Perris Valley and Area 25 – Lake Elsinore, which is located just west of Area 28.

Table 7 summarizes the published air quality monitoring data from 2017 through 2019, which is the most recent 3-year period available. These pollutant levels were used to comprise a "background" for the project location and existing local air quality. The data shows that during the past few years, the project area has exceeded State thresholds for Ozone, NO_x, PM_{10} and $PM_{2.5}$.

Table 7
Local Air Quality

Air Pollutant Location	Averaging Time	Item	2017	2018	2019
Carbon Monoxide -- Lake Elsinore	1 Hour	Max 1-Hour (ppm)	1.1	1.1	1.6
		Exceeded State Standard (20 ppm)	No	No	No
		Exceeded National Standard (35 ppm)	No	No	No
	8 Hour	Max 8 Hour (ppm)	0.7	0.8	0.7
		Exceeded State Standard (9 ppm)	No	No	No
		Exceeded National Standard (9 ppm)	No	No	No
Ozone -- Perris Valley	1 Hour	Max 1-Hour (ppm)	0.120	0.117	0.118
		Days > State Standard (0.09 ppm)	33	31	26
	8 Hour	Max 8 Hour (ppm)	0.105	0.103	0.095
		Days > State Standard (0.07 ppm)	80	67	64
		Days >National Standard (0.070 ppm)	80	67	64
Nitrogen Dioxide -- Lake Elsinore	1 Hour	Max 1-Hour (ppm)	0.049	0.0413	0.038
		Exceeded State Standard (0.18 ppm)	No	No	No
	Annual	Annual Average (ppm)	0.0082	0.0085	0.0068
		Exceeded >State Standard (0.030 ppm)	No	No	Yes
		Exceeded >National Standard (0.053 ppm)	No	No	Yes
Sulfur Dioxide -- Perris Valley	1 Hour	Max 1 Hour (ppm)	--	--	--
		Exceed State Standard (0.25 ppm)	--	--	--
		Exceed National Standard (0.075 ppm)	--	--	--
Coarse Particulates (PM10) -- Perris Valley	24 Hour	Max 24-Hour ($\mu g/m^3$)	75	64	97
		Days > State Standard (50 $\mu g/m^3$)	11	3	5
		Days >National Standard (150 $\mu g/m^3$)	0	0	0
	Annual	Annual Average ($\mu g/m^3$)	32.2	29.7	25.3
		Exceeded State Standard (20 $\mu g/m^3$)	Yes	Yes	Yes
Fine Particulates (PM2.5) -- Lake Elsinore	24 Hour	Max 24-Hour ($\mu g/m^3$)	--	--	--
		Days >National Standard (35 $\mu g/m^3$)	--	--	--
	Annual	Annual Average ($\mu g/m^3$)	--	--	--
		Exceeded State Standard (12 $\mu g/m^3$)	--	--	--
		Exceeded National Standard (15 $\mu g/m^3$)	--	--	--

Source: https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year & http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/aaqmnp-appendix-a6BF4F040D8A9.pdf?sfvrsn=46

$\mu g/m^3$ = micrograms per cubic meter

ppm = part per million

3.0 Global Climate Change Setting

Global climate change is the change in the average weather of the earth that is measured by such things as alterations in temperature, wind patterns, storms, and precipitation. Current data shows that the recent period of warming is occurring more rapidly than past geological events. The average global surface temperature has increased by approximately 1.4° Fahrenheit since the early 20th Century. 1.4° Fahrenheit may seem like a small change, but it's an unusual event in Earth's recent history, and as we are seeing, even small changes in temperature can cause enormous changes in the environment.

The planet's climate record, preserved in tree rings, ice cores, and coral reefs, shows that the global average temperature has been stable over long periods of time. For example, at the end of the last ice age, when the Northeast United States was covered by more than 3,000 feet of ice, average global temperatures were only 5° to 9° Fahrenheit cooler than today. The Intergovernmental Panel on Climate Change (IPCC), which includes more than 1,300 scientists from the United States and other countries, forecasts a temperature rise of 2.5° to 10° Fahrenheit over the next century. Therefore, significant changes to the environment are expected in the near future.

The consequences of global climate change include more frequent and severe weather, worsening air pollution by increasing ground level ozone, higher rates of plant and animal extinction, more acidic and oxygen depleted oceans, strain on food and water resources, and threats to densely populated coastal and low lying areas from sea level rise.

The impacts of climate change are already visible in the Southwest United States. In California, the consequences of climate change include;

- A rise in sea levels resulting in the displacement of coastal businesses and residencies
- A reduction in the quality and supply of water from the Sierra snowpack
- Increased risk of large wildfires
- Exacerbation of air quality problems
- Reductions in the quality and quantity of agricultural products
- An increased temperature and extreme weather events
- A decrease in the health and productivity of California's forests

3.1 Greenhouse Gases

Most scientists agree the main cause of the current global warming trend is anthropogenic (human-induced) augmentation of the greenhouse effect. The greenhouse effect refers to the way gases in the earth's atmosphere trap and re-emits long wave infrared radiation, acting like a blanket insulating the earth. Activities such as fossil fuel combustion, industrial processes, agriculture, and waste decomposition have elevated the concentration of greenhouse gases in the atmosphere beyond the level of naturally occurring concentrations.

GHGs comprise less than 0.1 percent of the total atmospheric composition, yet they play an essential role in influencing climate. Greenhouse gases include naturally occurring compounds such as carbon dioxide (CO_2), methane (CH_4), water vapor (H_2O), and nitrous oxide (N_2O), while others are synthetic. Man-made GHGs include the chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs) and Perfluorocarbons (PFCs), as well as sulfur hexafluoride (SF_6). Different GHGs have different effects on the Earth's warming. GHGs differ from each other in their ability to absorb energy (their "radiative efficiency") and how long they stay in the atmosphere, also known as the "lifetime".

The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO_2. The larger the GWP, the more than a given gas warms the Earth compared to CO_2 over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases and allows policymakers to compare emissions reduction opportunities across sectors and gases.

Table 8 lists the 100-year GWP of GHGs from the Intergovernmental Panel on Climate Change (IPCC) fifth assessment report (AR5).

Table 8
Global Warming Potential of Greenhouse Gases[1, 2]

Gas Name	Formula	Lifetime (years)	GWP
Carbon Dioxide	CO_2		1
Methane	CH_4	12	28
Nitrous Oxide	N_2O	114	265
Sulphur Hexafluoride	SF_6	3200	23,500
Nitrogen Trifluoride	NF_3	740	16,100
Hexafluoroethane (PFC-116)	C_2F_6	10,000	11,100
Octafluoropropane (PFC-218)	C_3F_8	2,600	8,900
Octafluorocyclobutane (PFC-318)	C_4F_8	3,200	9,540
Tetrafluoromethane (PFC-14)	CF_4	50,000	6,630
Hydrofluorocarbon 125	HFC-125	29	3,170
Hydrofluorocarbon 134a	HFC-134a	14	1,300
Hydrofluorocarbon 143a	HFC-143a	52	4,800
Hydrofluorocarbon 152a	HFC-152a	1	138
Hydrofluorocarbon 227ea	HFC-227ea	34	3,350
Hydrofluorocarbon 23	HFC-23	270	12,400
Hydrofluorocarbon 236fa	HFC-236fa	240	8,060
Hydrofluorocarbon 245fa	HFC-245fa	8	858
Hydrofluorocarbon 32	HFC-32	5	677
Hydrofluorocarbon 365mfc	HFC-365mfc	9	804
Hydrofluorocarbon 43-10mee	HFC-43-10mee	16	1,650

[1] Source: IPCC Fifth Assessment Report (AR5)
https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf
[2] GWPs are used to convert GHG emission values to "carbon dioxide equivalent" (CO_2e) units

3.2 GHG Regulatory Setting - International

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations. The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change. The 2014 UN Climate Change Conference in Lima Peru provided a unique opportunity to engage all countries to assess how developed countries are implementing actions to reduce emissions.

Kyoto Protocol. The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008 – 2012 (UNFCCC 1997). On December 8, 2012, the Doha Amendment to the Kyoto Protocol was adopted. The amendment includes: New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from 2013 – 2020, a revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period, and Amendments to several articles of the Kyoto Protocol, which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period.

The Paris Agreement. The Paris agreement is the first comprehensive global climate agreement to be ratified by the United States, United Nations, China, and India; the largest producers of greenhouse gas emissions in the world. The agreement was negotiated by a total of 195 nations and entered into force on November 4, 2016. The central aim is to strengthen the global response to the threat of climate change by keeping the global temperature rise this century well below 2 degrees Celsius compared to pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. Currently, 123 parties have ratified the agreement.

3.3 GHG Regulatory Setting – National

Greenhouse Gas Endangerment. On December 2, 2009, the EPA announced that GHGs threaten the public health and welfare of the American people. The EPA also states that GHG emissions from on-road vehicles contribute to that threat. The decision was based on *Massachusetts v. EPA* (Supreme Court Case 05-1120) which argued that GHGs are air pollutants covered by the Clean Air Act and that the EPA has authority to regulate those emissions.

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy (CAFE) law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They required these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards were estimated to cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

The second phase of the national program for passenger cars, light-duty trucks, and medium-duty passenger vehicles covers model years 2017 through 2025. The final standards were established in 2012 and were projected to result in an average industry fleetwide level of 163 grams/mile of carbon dioxide (CO2) in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation also implemented the first national standards to reduce greenhouse gas emissions and improve the fuel efficiency of medium- and heavy-duty engines and vehicles trucks and buses in 2010. The standards applied to all on-road vehicles rated at a gross vehicle weight at or above 8,500 pounds, and the engines that power them, except those covered by the current GHG emissions and CAFE standards

for light duty vehicles, for model year 2014 to 2018. In 2016, the EPA and NHTSA finalized phase 2 of the standards which applied to model years 2018 through 2027.

The Safer Affordable Fuel Efficient (SAFE) Vehicles. The National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA) have amended certain previous Corporate Average Fuel Economy (CAFE) and greenhouse gas emissions standards for passenger cars and light trucks and establish new standards, covering model years 2021 through 2026. The (SAFE) Vehicles Rule published on April 30, 2020 and is effective as of June 29, 2020.

Mandatory Reporting of Greenhouse Gases. On January 1, 2010, the EPA started requiring large emitters of heat-trapping emissions to begin collecting GHG data under a new reporting system. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

Climate Adaptation Planning. The EPA's Climate Change Adaptation Plan identifies priority actions the EPA will take to incorporate considerations of climate change into its programs, policies, rules and operations to ensure they are effective under future climatic conditions. Under the Trump administration, the EPA has said it would continue to advance climate adaptation efforts and that the agency recognizes the challenges that communities face in adapting to a changing climate. The EPA currently runs the Climate Change Adaptation Resource Center (ARC-X) to help local governments prepare for climate change.

3.4 GHG Regulatory Setting – State of California

The State of California has been a leader in climate change legislation and has passed numerous bills to reduce greenhouse gas emissions across all sectors of the economy. Some of the key climate legislation in the State include the following:

Assembly Bill (AB) 32, California Global Warming Solutions Act of 2006. AB 32 set the stage for the State's transition to a sustainable, low-carbon future. AB 32 was the first program in the country to take a comprehensive, long-term approach to addressing climate change.[3] AB 32 was followed by Senate Bill (SB) 32, which further requires GHG

[3] California Air Resources Board. AB 32 Global Warming Solutions Act of 2006. https://ww2.arb.ca.gov/resources/fact-sheets/ab-32-global-warming-solutions-act-2006

emissions to be reduced to 40% below 1990 levels by 2030 and appointing CARB to develop policies (i.e. cap-and-trade) to achieve this goal.

Senate Bill (SB) 375, Sustainable Communities & Climate Protection Act of 2008. SB 375 requires the Air Resources Board to develop regional greenhouse gas emission reduction targets for passenger vehicles GHG reduction targets for 2020 and 2035 for each region covered by the State's 18 metropolitan planning organizations.[4]

Senate Bill (SB) 100, California Renewables Portfolio Standard Program. SB 100 established a landmark policy requiring renewable energy and zero-carbon resources supply 100 percent of electric retail sales to end-use customers by 2045.[5]

3.5 GHG Emissions Inventory

Table 9 shows the latest GHG emission inventories at the national, state, regional and local levels.

Table 9
GHG Emissions Inventory[1]

United States (2018)[2]	State of California (2018)[3]	SCAG (2020)[4]	County of Riverside (2017)[5]
6,678 $MMTCO_2e$	425 $MMTCO_2e$	216.4 $MMTCO_2e$	4.90 $MMTCO_2e$

[1] $MMTCO_2e$ = Million Metric Tons of Carbon Dioxide Equivalent
[2] https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks
[3] https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf
[4] http://www.scag.ca.gov/programs/Pages/GreenhouseGases.aspx
[5] https://planning.rctlma.org/Portals/14/CAP/2019/2019_CAP_Update_Full.pd

[4] California Air Resources Board. Sustainable Communities and Climate Protection Program. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-climate-protection-program/about
[5] California Energy Commission. SB 100 Joint Agency Report. https://www.energy.ca.gov/sb100

4.0 Modeling Parameters and Assumptions

The California Emissions Estimator Model Version 2016.3.2 (CalEEMod) was used to calculate criteria air pollutants and GHG emissions from the construction and operation of the project. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify criteria air pollutant and GHG emissions.

The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from off-site energy generation, solid waste disposal, vegetation planting and/or removal, and water use. The model also identifies mitigation measures to reduce criteria pollutant and GHG emissions. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts.

4.1 Emissions Modeling Overview

Due to the unique nature of the proposed project and some of the limitations in CalEEMod, there are a couple key assumptions that are noted, as follows.

1. The primary project land use type used for the emissions analysis is based on the energy usage and emissions from a residential home in CalEEMod. This type of land use most closely reflects the project's operational characteristics, which includes housing, cooking and general living facilities. The building floor area and lot area have been adjusted to reflect the proposed site plan.

2. The emissions analysis has been prepared using two separate CalEEMod modeling runs; one for construction and one for operation.

    a. The construction analysis accounts for the construction of the new structures/additions and the land clearing and installation activities associated with the solar farm (modeled as "other non-asphalt surfaces").

    b. The operational analysis includes the total future building area for the project plus additional emissions associated with outdoor recreational uses, such as the swimming pools, lakes, and ball courts, etc. (modeled as "city park").

4.2 Construction Assumptions

Construction of the project is estimated to begin in the year 2021 and expected to last approximately 15 months. Construction activities are based on CalEEMod defaults assumptions and consist of site preparation, grading, building construction, paving, and architectural coating.

The project proposes to add approximately 37,130 square feet of new building area. The project is also proposing to develop approximately 51.4 acres of land into solar installation field. The project is not expected to require the import or export of earthwork material.

The CalEEMod default construction equipment list is based on survey data and the size of the site. The parameters used to estimate construction emissions, such as the worker and vendor trips and trip lengths, utilize the CalEEMod defaults.

The construction equipment list is shown in Table 10.

The quantity of fugitive dust estimated by CalEEMod is based on the number of equipment used during site preparation and grading. CalEEMod estimates the worst-case fugitive dust impacts will occur during the grading phase. The maximum daily disturbance footprint would be 4 acres per 8-hour day with all equipment in use.

CalEEMod calculates emissions for both on-site and off-site emissions sources. Onsite emissions occur from activities occurring on the project site. Off-site emissions sources mainly consist of motor vehicle exhaust from trips to and from the project, as well as indirect off-site energy production.

Table 10
Construction Equipment Assumptions Phase [1]

Phase	Equipment	Number	Hours Per Day	Soil Disturbance Rate (Acres/ 8hr-Day)	Off-Road Equipment Daily Disturbance Footprint (Acres)	Total Daily Disturbance Footprint (Acres)
Site Preparation	Rubber Tired Dozers	3	8	0.5	1.50	3.5
	Tractors/Loaders/Backhoes	4	8	0.5	2.00	
Grading	Excavators	2	8	0.0	0.00	4.0
	Graders	1	8	0.5	0.50	
	Rubber Tired Dozers	1	8	0.5	0.50	
	Scrappers	2	8	1.0	2.00	
	Tractors/Loaders/Backhoes	2	8	0.5	1.00	
Building Construction	Cranes	1	7	0.0	0.00	1.3
	Forklifts	3	8	0.0	0.00	
	Generator Sets	1	8	0.0	0.00	
	Tractors/Loaders/Backhoes	3	7	0.5	1.31	
	Welders	1	8	0.0	0.00	
Paving	Pavers	2	8	0.0	0.00	0.0
	Paving Equipment	2	8	0.0	0.00	
	Rollers	2	8	0.0	0.00	
Architectural Coating	Air Compressors	1	6	0.0	0.00	0.0

[1] CalEEMod Defaults

4.3 Localized Construction Analysis Modeling Parameters

CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. This report identifies the following parameters in the project design or applicable mitigation measures in order to compare CalEEMod reported emissions against the localized significance threshold lookup tables:

1) The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
2) The maximum number of acres disturbed on the peak day.

3) Any emission control devices added onto off-road equipment.
4) Specific dust suppression techniques used on the day of construction activity with maximum emissions.

Based on recent discussions with SCAQMD, the Fact Sheet for Applying CalEEMod to Localized Significance Thresholds should no longer be used to determine disturbance acreage for the localized analysis.

4.4 Operational Assumptions

Operational emissions occur over the life of the project and are considered "long-term" sources of emissions. Operational emissions include both direct and indirect sources. This section briefly describes the operational sources of emissions analyzed for the project.

Once operational, the total building area on the project site will be approximately 69,146 square feet. For purposes of this analysis, approximately 4 acres of outdoor recreational area on the project site has been modeled as "City Park".

4.4.1 Mobile Source Emissions

Mobile source emissions are direct sources of project emissions that are primarily attributed to tailpipe exhaust and road dust (tire, brake, clutch, and road surface wear) from motor vehicles traveling to and from the site.

Estimates of mobile source emissions require information on four parameters: trip generation, trip length, vehicle/fleet mix, and emission factors (quantity of emission for each mile traveled or time spent idling by each vehicle).

The trip generation rates for this project are consistent with the Paradise Valley Ranch Project Traffic Assessment Scoping Agreement, RK Engineering Group, March 2021, which estimates that the project would generate approximately 224 average daily traffic (ADT).

Operational vehicle trip assumptions are based on the CalEEMod default trip lengths, trip type, and diverted/pass-by trips. The CalEEMod default trip assumptions are shown in the report output sheets provided in Appendix B.

The Emission Factors (EMFAC) 2014 model is used to estimate the mobile source emissions are embedded in the CalEEMod emissions model. No adjustments have been made to default emission factors.

The project's estimated unmitigated vehicle miles traveled are shown in the Table 11 for all the land uses for this project.

Table 11
Operational Trips and Vehicle Miles Traveled

Land Use	Average Daily Traffic (ADT)	Annual Vehicle Miles Traveled (VMT)
Project Total	224	1,226,317

The operational vehicle fleet mix is shown in Table 12, and is based on the default CalEEMod fleet mix.

Table 12
Vehicle Mix for Trips[1]

Vehicle Classification	Vehicle Mix (%)
Light Duty Automobile (LDA)	54.55%
Light Duty Truck (LDTI)	3.69%
Light Duty Truck (LDT2)	18.60%
Medium Duty Truck (MDV)	11.53%
Light Heavy Truck (LHD1)	1.52%
Light Heavy Truck (LHD2)	0.50%
Medium Heavy Truck (MHD)	1.75%
Heavy Heavy Truck (HHD)	6.95%
Other Bus (OBUS)	0.14%
Urban Bus (UBUS)	0.12%
Motorcycle (MCY)	0.45%
School Bus (SBUS)	0.09%
Motor Home (MH)	0.10%
Total	**100.0%**

[1] CalEEMod defaults.

4.4.2 Energy Source Emissions

The project is expected to generate near 100% of its energy requirement through the proposed solar farm. However, in order to be conservative, this analysis does not take on-site solar energy use into consideration.

The proposed project anticipates using on-site propane storage instead of natural gas for most of its onsite energy requirements. However, CalEEMod does not calculate emissions from propose, thus, for purposes of this analysis, emissions from natural gas usage are assumed. Propane is a relatively clean-burning fuel, which is attributed to its lower carbon content. However, like natural gas, its combustion does still produce wastes, such as particulate matter, sulfur dioxide, nitrogen oxides, nitrous oxide, carbon monoxide, greenhouse gas, methane and non-methane overall organic carbon. Therefore, the estimates for natural gas versus propane usage are considered acceptable.

Energy usage includes both direct and indirect sources of emissions. Direct sources of emissions include on-site natural gas usage (non-hearth) for heating, while indirect emissions include electricity generated by offsite power plants. Natural gas use is measured in thousands of British Thermal Units (kBTU) per size metric for each land use subtype and electricity use is measured in kilowatt hours (kWh) per size metric for each land use subtype.

CalEEMod divides building electricity and natural gas use into uses that are subject to Title 24 standards and those that are not. Lighting electricity usage is also calculated as a separate category in CalEEMod. For electricity, Title 24 uses include the major building envelope systems covered by Part 6 (California Energy Code) of Title 24, such as space heating, space cooling, water heating, and ventilation. Non-Title 24 uses include all other end uses, such as appliances, electronics, and other miscellaneous plug-in uses. Because some lighting is not considered as part of the building envelope energy budget, and since a separate mitigation measure is applicable to this end use, CalEEMod makes lighting a separate category.

To be conservative, electricity usage from outdoor lighting, pool pumps, etc. are added to the city park land use, as CalEEMod does not assume electricity usage for this type of use. The adjusted electricity usage is assumed to be 0.35 KWhr per square foot per year. This is based on a similar usage rate for a surface parking lot.

For natural gas, uses are likewise categorized as Title 24 or Non-Title 24. Title 24 uses including building heating and hot water end uses. Non-Title 24 natural gas uses include cooking and appliances (including pool/spa heaters).

The baseline values are based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

Table 13 shows the total annual expected electricity and natural gas usage for the proposed project.

Table 13
Electricity and Propane Usage

Land Use	Electricity Usage[1] (KWhr/yr)[2]	Propane Usage[1] (KBTU/yr)[2, 3]
Project Total	290,433	302,985

[1] CalEEMod default estimates.

[2] KWhr/yr = Kilowatt Hours per Year
KBTU/yr = Thousand British Thermal Units per Year

[3] Propane combustion results in a slightly higher carbon dioxide (CO_2) emissions coefficient than natural gas
Propone CO_2 Coefficient = 139.05 lbs CO2 / Million BTU.
Natural Gas CO_2 Coefficient = 117.00 lbs CO2 / Million BTU. (Source US EIA)

4.4.3 Area Source Emissions

Area source emissions are direct sources of emissions that fall under four categories; hearths, consumer products, architectural coatings, and landscaping equipment. Per SCAQMD rule 445, no wood burning devices are allowed in new developments; therefore, no wood hearths are included in this project.

Consumer products are various solvents used in non-industrial applications which emit ROGs during their product use. These typically include cleaning supplies, kitchen aerosols, cosmetics and toiletries.

4.4.4 Other Sources of Operational Emissions

Water. Greenhouse gas emissions are generated from the upstream energy required to supply and treat the water used on the project site. Indirect emissions from water usage

are counted as part of the project's overall impact. The estimated water usage for the project is reported in Table 14.

In order to estimate outdoor water usage from the irrigation, approximately 4 acres of "City Park" land use has been added to this analysis.

Waste. CalEEMod calculates the indirect GHG emissions associated with waste that is disposed of at a landfill. The program uses annual waste disposal rates from the California Department of Resources Recycling and Recovery (CalRecycle) data for individual land uses. The program quantifies the GHG emissions associated with the decomposition of the waste which generates methane based on the total amount of degradable organic carbon.

The estimated waste generation by the project is reported in Table 14.

Table 14
Operational Water Usage and Waste Generation

Land Use	Water Usage (gallons/year)			Waste Generation (tons/year)[1]
	Indoor[1]	Outdoor	Total	
Center of Excellence	3,503,602	2,156,513	5,660,115	25.04
Outdoor Irrigation (City Park)	--	4,765,930	4,765,930	0.34
Project Total	**3,503,602**	**6,922,443**	**10,426,045**	**25.38**

[1] CalEEMod default estimates.

5.0 Significance Thresholds

5.1 Air Quality Regional Significance Thresholds

The SCAQMD has established air quality emissions thresholds for criteria air pollutants for the purposes of determining whether a project may have a significant effect on the environment per Section 15002(g) of the Guidelines for implementing CEQA. By complying with the thresholds of significance, the project would be in compliance with the SCAQMD Air Quality Management Plan (AQMP) and the federal and state air quality standards.

Table 15 lists the air quality significance thresholds for the six air pollutants analyzed in this report. Lead is not included as part of this analysis as the project is not expected to emit lead in any significant measurable quantity.

Table 15
SCAQMD Regional Significance Thresholds

Pollutant	Construction (lbs/day)	Operation (lbs/day)
NO_X	100	55
VOC	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550

[1] Source: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf

5.2 Air Quality Localized Significance Thresholds

Air quality emissions were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold (LST) Look-up Tables.

Table 16 lists the Localized Significance Thresholds (LST) used to determine whether a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard.

LSTs are developed based on the ambient concentrations of four applicable air pollutants for source receptor area (SRA) 28 – Hemet/ San Jacinto Valley.

The nearest existing sensitive receptor is a residential home located approximately 1,000 feet from the property line to the west of the site. However, in order to be conservative, a threshold of significance of 100 meters has been used for the purpose of this analysis.

The daily disturbance area is calculated to be 4 acres, however LST thresholds are only reported for 1, 2 and 5-acre sites. In order to be conservative, the threshold for 2-acre site at 100 feet has been used to establish the LST thresholds.

Table 16
SCAQMD Localized Significance Thresholds[1] (LST)

Pollutant	Construction (lbs/day)	Operation (lbs/day)
NO_X	363	363
CO	2,781	2,781
PM_{10}	38	10
$PM_{2.5}$	10	3

[1] Source: SCAQMD Mass Rate Localized Significance Thresholds for 2-acre site in SRA-28 at 100 meters.

5.3 Riverside County General Plan Air Quality Element

This Riverside County General Plan Air Quality Element establishes goals, policies and programs that are meant to balance the County's actions regarding land use, circulation and other issues with their potential effects on air quality and global climate change.

In order for the project's air quality and GHG impact to be considered less than significant, the project should not conflict with, or obstruct implementation of, the Riverside County General Plan Air Quality Element.

5.4 Riverside County Climate Action Plan and GHG Significance Thresholds

Riverside County is the lead agency under CEQA for the proposed project, and therefore, GHG thresholds of significance are based on the adopted Riverside County Climate Action Plan (CAP). Riverside County adopted the CAP in December 2015, and has now prepared the most recent update in November 2019, in an effort to reduce community-wide GHG emissions. The purpose of the CAP is to adopt a plan that is consistent with and

complementary to the GHG emissions reduction efforts being conducted by the State of California through the Global Warming Solutions Act (AB 32).

The implementation mechanisms for the CAP are the Screening Tables for New Development. The Screening Tables allow new development projects a streamlined option for complying with CEQA requirements for addressing GHG emissions. Additionally, Riverside County's Climate Action Plan details policies to reduce emissions from municipal and community-wide sources; including emissions from existing buildings and new development. Projects also have the option of preparing a project-specific technical analysis to quantify and mitigate GHG emissions.

- A threshold level above 3,000 MTCO2e per year will be used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions.

The screening tables are setup similar to a checklist, with points allocated to certain elements that reduce greenhouse gas emissions. If a project garners 100 points (by including enough GHG reducing elements), then the project is consistent with Riverside County's plan for reducing emissions.

6.0 Air Quality Impact Analysis

Consistent with CEQA and the State CEQA Guidelines, a significant impact related to air quality would occur if the proposed project is determined to:

a) Conflict with, or obstruct implementation of, the applicable air quality plan?

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

c) Expose sensitive receptors to substantial pollutant concentrations.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

6.1 Short Term Air Quality Impacts - Construction

6.1.1 Regional Emissions - Construction

Regional air quality emissions include both on-site and off-site emissions associated with construction of the project. Regional daily emissions of criteria pollutants are compared to the SCAQMD mass daily thresholds of significance.

Table 17 shows that the project's daily construction emissions will be below the applicable SCAQMD regional air quality standards and thresholds of significance. As a result, the project would not contribute substantially to an existing or projected air quality violation. Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The project's short-term construction impact on regional air quality is less than significant.

CalEEMod daily emissions outputs are provided in Appendix A.

Table 17
Regional Construction Emissions

Maximum Daily Emissions (lbs/day)[1]						
Activity	**VOC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Site Preparation	3.99	40.56	22.03	0.04	9.23	5.75
Grading	4.31	46.47	31.85	0.06	5.61	3.28
Building Construction	8.47	56.44	68.91	0.27	18.08	5.61
Paving	1.19	11.17	15.25	0.02	0.80	0.58
Architectural Coating	46.53	2.03	10.27	0.03	2.94	0.85
Maximum[1]	**46.53**	**56.44**	**68.91**	**0.27**	**18.08**	**5.75**
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Threshold (?)	No	No	No	No	No	No

[1] Maximum daily emission during summer or winter; includes both on-site and off-site project emissions.

The air quality emissions shown in Table 17 include standard SCAQMD rules and requirements with regards to fugitive dust control. For CEQA purposes, dust control compliance is considered a standard requirement and included as part of the project's design features, not mitigation. Section 6.1.3 provides further discussion on the specific dust control measures applicable to this project.

6.1.2 Localized Emissions - Construction

Table 18 illustrates the construction related localized emissions and compares the results to SCAQMD LST thresholds. As shown in Table 18, the emissions will be below the SCAQMD thresholds of significance for localized construction emissions. The project must follow all standard SCAQMD rules and requirements with regards to fugitive dust control, as described in Section 6.1.3. Compliance with the dust control is considered a standard requirement and included as part of the project's design features, not mitigation.

The project's short-term construction impact to localized air resources is less than significant.

Table 18
Localized Construction Emissions

Maximum Daily Emissions (lbs/day)[1]				
Activity	**NOx**	**CO**	**PM_{10}**	**$PM_{2.5}$**
On-site Emissions	46.40	30.88	8.95	5.68
SCAQMD Construction Threshold[2]	363.0	2,781.0	38.0	10.0
Exceeds Threshold (?)	No	No	No	No

[1] Maximum daily emission during summer or winter; includes on-site project emissions only.
[2] Reference 2006-2008 SCAQMD Mass Rate Localized Significant Thresholds for construction and operation. SRA-28, Hemet/ San Jacinto Valley, 2-acre site, receptor distance 100 meters.

6.1.3 Fugitive Dust - Construction

The Project is required to comply with local and regional rules that assist in reducing short-term air pollutant emissions associated with suspended particulate matter, also known as fugitive dust. Fugitive dust emissions are commonly associated with land clearing activities, cut-and-fill grading operations, and exposure of soils to the air and wind. SCAQMD Rule 403 requires that fugitive dust is controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rules 402 and 403 require implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site.

Applicable suppression techniques are as follows:

1. All active construction areas shall be watered two (2) times daily.
2. Speed on unpaved roads shall be reduced to less than 15 mph.
3. Any visible dirt deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
4. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
5. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
6. Access points shall be washed or swept daily.
7. Construction sites shall be sandbagged for erosion control.
8. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).

9. Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.
10. Pave or gravel construction access roads at least 100 feet onto the site from the main road and use gravel aprons at truck exits.
11. Replace the ground cover of disturbed areas as quickly possible.
12. A fugitive dust control plan should be prepared and submitted to SCAQMD prior to the start of construction.

Localized construction emissions, shown in Section 6.1.2, indicate daily construction emissions, with the recommended design features, would be below the applicable thresholds established by the SCAQMD. **The proposed project's short-term fugitive dust generating construction activities would cause less than significant.**

6.1.4 Odors - Construction

Heavy-duty equipment, including diesel construction equipment, in the project area during construction will emit odors; however, the construction activity would cease to occur after individual construction is completed. The project is required to comply with Rule 402 during construction, which states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. No other sources of objectionable odors have been identified for the proposed Project. **Therefore, the project impact from odor emissions is less than significant.**

6.1.5 Asbestos - Construction

Based on the California Division of Mines and Geology General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos, naturally occurring asbestos, found in serpentine and ultramafic rock, has not been shown to occur within in the vicinity of the project site. Therefore, the potential risk for naturally occurring asbestos (NOA) during project construction is small. However, in the event NOA is found on the site, the project will be required to comply with the National Emission Standard for Hazardous Air Pollutants (NESHAP) standards. An Asbestos NESHAP Notification Form shall be completed and submitted to the CARB immediately upon discovery of the contaminant. The project will be required to follow NESHAP standards for

emissions control during site renovation, waste transport and waste disposal. A person certified in asbestos removal procedures will be required to supervise on-site activities.

By following the required asbestos abatement protocols, **the project impact is less than significant**.

6.1.6 Diesel Particulate Matter - Construction

The greatest potential for toxic air contaminant emissions from the project would be related to diesel particulate matter (DPM) emissions associated with heavy diesel equipment used during construction. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 30-year lifetime will contract cancer, based on the use of standard risk-assessment methodology.

As shown in Tables 17 and 18, construction-based particulate matter (PM) emissions would be below the regional and localized emissions levels and given the short-term construction schedule, the proposed project's construction activity is not expected to be a substantial source of toxic air contaminant emissions that would indicate long-term exposure and elevated cancer risk. It should be noted, however, that a quantified health risk assessment has not been performed for this project.

In September 2000, the CARB adopted the Diesel Risk Reduction Plan, which recommends several control measures to reduce the risks associated with diesel particulate matter (DPM). The key elements of the Plan are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel engines, to lower the sulfur content of diesel fuel, and implement advanced technology emission control devices on diesel engines.

Given the physical distance separating the project site from the nearest sensitive receptors (approximately 1,000 feet), and the temporary duration of construction activity, the proposed project's construction activity is not expected significantly expose sensitive receptors to substantial pollution concentrations. In order to ensure the level of DPM exposure is reduced as much as possible, the project should implement the best available pollution control strategies to minimize potential health risks. The follow DPM control measures include:

- Utilize low emission "clean diesel" equipment with new or modified Tier 4 engines that include diesel oxidation catalysts, diesel particulate filters or Moyer Program retrofits that meet CARB best available control technology, where feasible.

- Establish staging areas for the construction equipment that are as distant as possible from adjacent sensitive receptors;

- Establish an electricity supply to the construction site and use electric powered equipment instead of diesel-powered equipment or generators, where feasible;

- Use haul trucks with on-road engines instead of off-road engines for on-site hauling.

6.1.7 Lead Renovation, Repair and Painting - Construction

California EPA requires that presumed (pre-1978) lead-based paint chips and dust be disposed of as hazardous waste. A lead certificate is required by the California Department of Public Health (CDPH) for all those doing lead hazard evaluations, lead abatement plan preparation, lead abatement work, and lead clearance inspections for residential and public buildings in California. A lead hazard evaluation should be performed prior to the demolition or occupancy of any structure on the project site built before 1978. If necessary, a lead abatement plan and clearance inspection should be provided prior to occupancy.

By following the standard rules and requirements for lead renovation, repairs and painting, the project would not expose sensitive receptors to substantial pollution concentrations and the impact from lead would be considered less than significant.

6.2 Long Terms Air Quality Impacts - Operation

6.2.1 Regional Emissions - Operation

Long-term operational air pollutant impacts from the project are shown in Table 19. The project is not expected to exceed any of the allowable daily emissions thresholds for criteria pollutants at the regional level. CalEEMod daily emissions outputs are provided in Appendix A.

The project's daily operational emissions will be below the applicable SCAQMD regional air quality standards and thresholds of significance, and the project would not contribute

substantially to an existing or projected air quality violation. Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The project related long-term air quality impacts are less than significant.

Table 19
Regional Operational Emissions

Maximum Daily Emissions (lbs/day)[1]						
Activity	**VOC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Mobile Sources	0.50	3.83	7.58	0.03	2.64	0.72
Energy Sources	0.01	0.08	0.04	0.00	0.01	0.01
Area Sources	1.55	0.12	0.71	0.00	0.01	0.01
Total	**2.06**	**4.03**	**8.33**	**0.03**	**2.66**	**0.74**
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold (?)	No	No	No	No	No	No

[1] Maximum daily emission during summer or winter; includes both on-site and off-site project emissions.

6.2.2 Localized Operational Emissions - Operation

Table 20 shows the localized operational emissions and compares the results to SCAQMD LST thresholds of significance. As shown in Table 20, the emissions will be below the SCAQMD thresholds of significance for localized operational emissions.

The project will result in less than significant localized operational emissions impacts.

Table 20
Localized Operational Emissions

Maximum Daily Emissions (lbs/day)[1]				
LST Pollutants	NOx (lbs/day)	CO (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
On-site Emissions[1]	0.39	1.13	0.2	0.1
SCAQMD Operation Threshold[2]	363.0	2,781.0	10.0	3.0
Exceeds Threshold (?)	No	No	No	No

[1] Maximum daily emission in summer or winter.
[2] Mobile source emissions include on-site vehicle emissions only. It is estimated that approximately 5% of mobile emissions will occur on the project site.
[3] Reference: 2006-2008 SCAQMD Mass Rate Localized Significant Thresholds for construction and operation Table C-1 through C-6; SRA 28, Hemet/ San Jacinto Valley disturbance area of 2-acre and receptor distance of 100 meters.

6.2.3 Odors - Operation

Land uses that commonly receive odor complaints include agricultural uses (farming and livestock), chemical plants, composting operations, dairies, fiberglass molding facilities, food processing plants, landfills, refineries, rail yards, and wastewater treatment plants. The project is located within a rural/agricultural community and any odor emitting agricultural activities would be consistent with the surrounding uses and environment.

The project will be required to comply with standard building code requirements related to exhaust ventilation, as well as comply with SCAQMD Rule 402. Rule 402 requires that a person may not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Project related odors are not expected to meet the criteria of being a nuisance. **The project's operation would result in less than significant odor impacts.**

6.2.4 Toxic Air Contaminants - Operations

A Toxic Air Contaminant (TAC) is defined as air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health, and for which there is no concentration that does not present some risk. The primary

source of TACs from non-industrial land use development projects would include diesel particulate matter (DPM) generated from diesel exhaust emissions.

The project does not include major sources of toxic air contaminants (TAC) emissions that would result in significant exposure of sensitive receptors to substantial pollutant concentrations. **Therefore, the project impact is considered less than significant**.

6.3 CO Hot Spot Emissions

A CO hot spot is a localized concentration of carbon monoxide (CO) that is above the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. At the time of the publishing of the 1993 CEQA Air Quality Handbook, the SCAB was designated nonattainment, and projects were required to perform hot spot analyses to ensure they did not exacerbate an existing problem. Since this time, the SCAB has achieved attainment status and the potential for hot spots caused by vehicular traffic congestion has been greatly reduced.
In fact, the SCAQMD Air Quality Management Plan (AQMP) found that peak CO concentrations were primarily the result of unusual meteorological and topographical conditions, not traffic congestion.

According to the Paradise Valley Ranch Traffic Assessment Scoping Agreement, RK Engineering Group, March 2021, the project is expected to generate a maximum of 224 daily trips. This is considered a less than significant amount of traffic, which would not contribute to CO Hot Spots, hence the project did not even warrant a full traffic impact study per County standards.

The 2003 SCAQMD AQMP also found that at four of the busiest intersections in Los Angeles there were no CO hot spots concentrations. Additionally, historical data indicates that the maximum concentration of CO recorded over the last three years at the nearest air monitoring station to the site is about 92% below the State 1-hour standard and 91% below the 8-hour standard.

Therefore, if some of the busiest intersections in the basin do not exceed state or federal standards, and the nearest air monitoring station shows that CO levels are well below the standards in the project vicinity, it is then reasonable to conclude that **the project would not significantly contribute to the formation of CO Hot Spots.**

6.4 SCAQMD Air Quality Management Plan Consistency

CEQA requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD Air Quality Management Plan (AQMP). Therefore, this section discusses any potential inconsistencies in the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies.

The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP in 2016 or increments based on the year of project buildout and phase.

6.4.1 Criterion 1 - Increase in the Frequency or Severity of Violations

The results of the short-term construction emission levels and long-term operational emission levels show that the project would not result in significant impacts based on the SCAQMD regional and local thresholds of significance. Therefore, the proposed project would not contribute to the exceedance of an air pollutant concentration standard and is found to be consistent with the AQMP for the first criterion.

6.4.2 Criterion 2 - Exceed Assumptions in the AQMP

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The 2016-2040 Regional Transportation/Sustainable Communities Strategy, prepared by SCAG, 2016, includes chapters on: the challenges in a changing region, creating a plan for our future, and the road to greater mobility and sustainable growth. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA.

The project consists of the redevelopment of an existing use and will in many respects continue to function as it has for the last 40 years. Any increase in the amount of operational emissions, beyond what was previously occurring at the site, is considered less than significant, as evident in the regional and local emissions analysis described above.

7.0 Greenhouse Gas Impact Analysis

Consistent with CEQA Guidelines, a significant impact related to greenhouse gas would occur if the proposed project is determined to:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases.

7.1 Greenhouse Gas Emissions - Construction

Greenhouse gas emissions are estimated for on-site and off-site construction activity using CalEEMod. Table 21 shows the construction greenhouse gas emissions, including equipment and worker vehicle emissions for all phases of construction. Construction emissions are amortized over 30 years and added to the long-term operational emissions, pursuant to SCAQMD recommendations.

CalEEMod annual GHG output calculations are provided in Appendix B.

Table 21
Construction Greenhouse Gas Emissions

Activity	Emissions ($MTCO_2e/yr$)[1]		
	On-site	Off-site	Total
Site Preparation	33.71	2.14	35.85
Grading	54.94	2.38	57.32
Building Construction	291.37	2,607.18	2,898.55
Paving	20.19	1.72	21.91
Architectural Coating	2.56	21.69	24.25
Total	**402.77**	**2,635.11**	**3,037.88**
Amortized over 30 years[2]	**13.43**	**87.84**	**101.26**

[1] $MTCO_2e/yr$ = metric tons of carbon dioxide equivalents per year.
[2] The emissions are amortized over 30 years and added to the operational emissions, pursuant to SCAQMD recommendations.

7.2 Greenhouse Gas Emissions - Operation

Greenhouse gas emissions are estimated for on-site and off-site operational activity using CalEEMod. Greenhouse gas emissions from mobile sources, area sources and energy sources are shown in Table 22. CalEEMod annual GHG output calculations are provided in Appendix B.

Table 22
Operational Greenhouse Gas Emissions

Emission Source	GHG Emissions ($MTCO_2e/yr$)[1]
Mobile Source	533.81
Energy Source	109.13
Area Source	1.78
Water	43.95
Waste	12.76
Construction (30-year amortization)	101.26
Total Annual Emissions	**802.69**
Riverside County CAP Threshold[2]	3,000
Exceed Tier 3 Threshold?	No

[1] $MTCO_2e/yr$ = metric tons of carbon dioxide equivalents per year.
[2] Per Riverside County Climate Action Plan screening threshold levels for small projects.

As shown in Table 22, the project GHG emissions are expected to be below the County's CAP threshold, which limits GHG emissions to 3,000 $MTCO_2e$ for land use development projects.

The project related long-term GHG impacts are less than significant.

7.3 Riverside County Climate Action Plan

The Riverside County Climate Action Plan (CAP) establishes a threshold of significance of 3,000 $MTCO_2e$ for land use development projects. Projects that exceed the CAP threshold may result in a potentially significant GHG impact and would require the use of Screening Tables to mitigate the project emissions.

The screening tables are setup similar to a checklist, with points allocated to certain elements of the project that would contribute to reduced greenhouse gas emissions. If a project garners 100 points (by including enough GHG reducing elements), then the project is consistent with Riverside County's plan for reducing emissions.

Based on the results of the quantified GHG emissions analysis, the proposed project would not exceed the CAP threshold of significance. Thus, implementation of the screening tables is not required and the project would not be inconsistent with the CAP.

Furthermore, the project will also be required to comply with the mandatory requirements of Title 24 part 11 of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building Efficiency Standards (Energy Code) to further reduce energy usage and GHG emissions. CALGreen and Energy Code compliance are considered part of the project's design features.

By complying with the goals and policies of the CAP, the project will also be in compliant with the broader statewide goals for combating climate change; such as those required in the CARB Scooping Plan and SB 32. The purpose of the County's CAP is to ensure compliance with the state's climate initiatives for reducing GHG emissions.

Therefore, the project will not conflict with an applicable plan, policy or regulation for the purpose of reducing the emissions of greenhouse gases and the impact is considered less than significant.

8.0 References

The following references were used in the preparing this analysis.

CalEEMod. California Emissions Estimator Model. Version 2016.3.2. Website: http://caleemod.com/.

California Air Pollution Control Officers Association. 2008. CEQA & Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. Website: www.capcoa.org/.

California Air Pollution Control Officers Association. 2010. Quantifying Greenhouse Gas Mitigation Measures. August 2010. Website: http://www.capcoa.org/documents.

California Air Resources Board. 2006. EMFAC2007 Mobile Source Emission Model. Website: www.arb.ca.gov/msei/onroad/latest_version.htm.

California Air Resources Board. 2007. Staff Report. California 1990 Greenhouse Gas Level and 2020 Emissions Limit. November 16, 2007. Website: www.arb.ca.gov/cc/inventory/pubs/reports/staff_report_1990_level.pdf.

California Air Resources Board. 2017. Climate Change Scoping Plan Update. January 2017. Website: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf

California Air Resources Board. 2010d. Greenhouse Gas Inventory – 2020 Forecast. Website: http://www.arb.ca.gov/cc/inventory/data/forecast.htm. Accessed July 2012.

California Air Resources Board. 2011d. Landfill Methane Control Measure. Website: http://arb.ca.gov/cc/landfills/landfills.htm. Accessed October 3, 2011.

California Air Resources Board. 2011e. Advanced Clean Cars. Website: http://www.arb.ca.gov/msprog/consumer_info/advanced_clean_cars/consumer_acc.htm. Accessed October 3, 2011.

California Air Resources Board. 2011f. Refrigerant Management Program Regulation for Non-Residential Refrigeration Systems. Website: http://www.arb.ca.gov/cc/reftrack/reftrack.htm. Accessed October 3, 2011.

County of Riverside. Climate Action Plan. Revised July 2018. Website: https://planning.rctlma.org/CAP

County of Riverside. General Plan. Website: https://planning.rctlma.org/Zoning-Information/General-Plan

Federal Clean Air Act, U.S. Code Title 42, Chapter 85, § 7401 et seq.

Intergovernmental Panel on Climate Change. 2001. Climate Change 2001: The Scientific Basis. Website: http://www.grida.no/climate/ipcc_tar/wg1/pdf/WG1_TAR-FRONT.pdf. Accessed August 2012.

Intergovernmental Panel on Climate Change. 2007a. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, Website: www.ipcc.ch/ipccreports/ar4-wg1.htm. Accessed April 22, 2011.

Intergovernmental Panel on Climate Change. 2007b. Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland. Accessed Aug 2012. Website: www.ipcc.ch/publications_and_data/ar4/syr/en/contents.html

Moser et al. 2009. Moser, Susie, Guido Franco, Sarah Pittiglio, Wendy Chou, Dan Cayan. 2009. The Future Is Now: An Update on Climate Change Science Impacts and Response Options for California. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2008-071. Website: www.energy.ca.gov/2008publications/CEC-500-2008-071/CEC-500-2008-071.PDF. Accessed: August 2011.

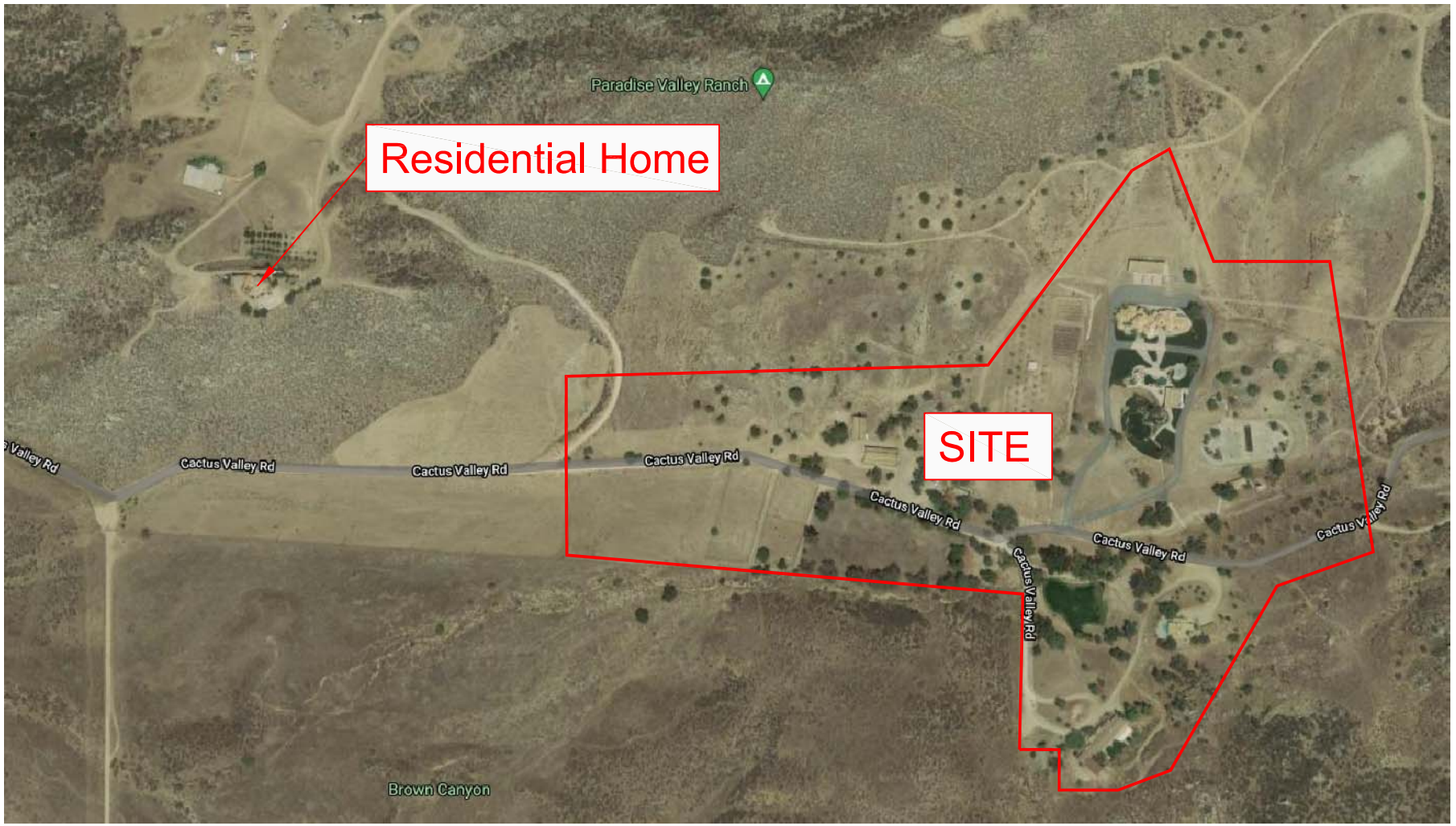
South Coast Air Quality Management District. 2008c. Draft Guidance Document – Interim CEQA Greenhouse (GHG) Significance Threshold Document. Website: http://www.aqmd.gov/hb/2008/December/081231a.htm. (Attachment E) Accessed: August 2012

U.S Environmental Protection Agency 2010a, Final GHG Tailoring Rule, 40 CFR Parts 51, 52, 70, et al., May 2010.

Exhibits

Exhibit A

Location Map

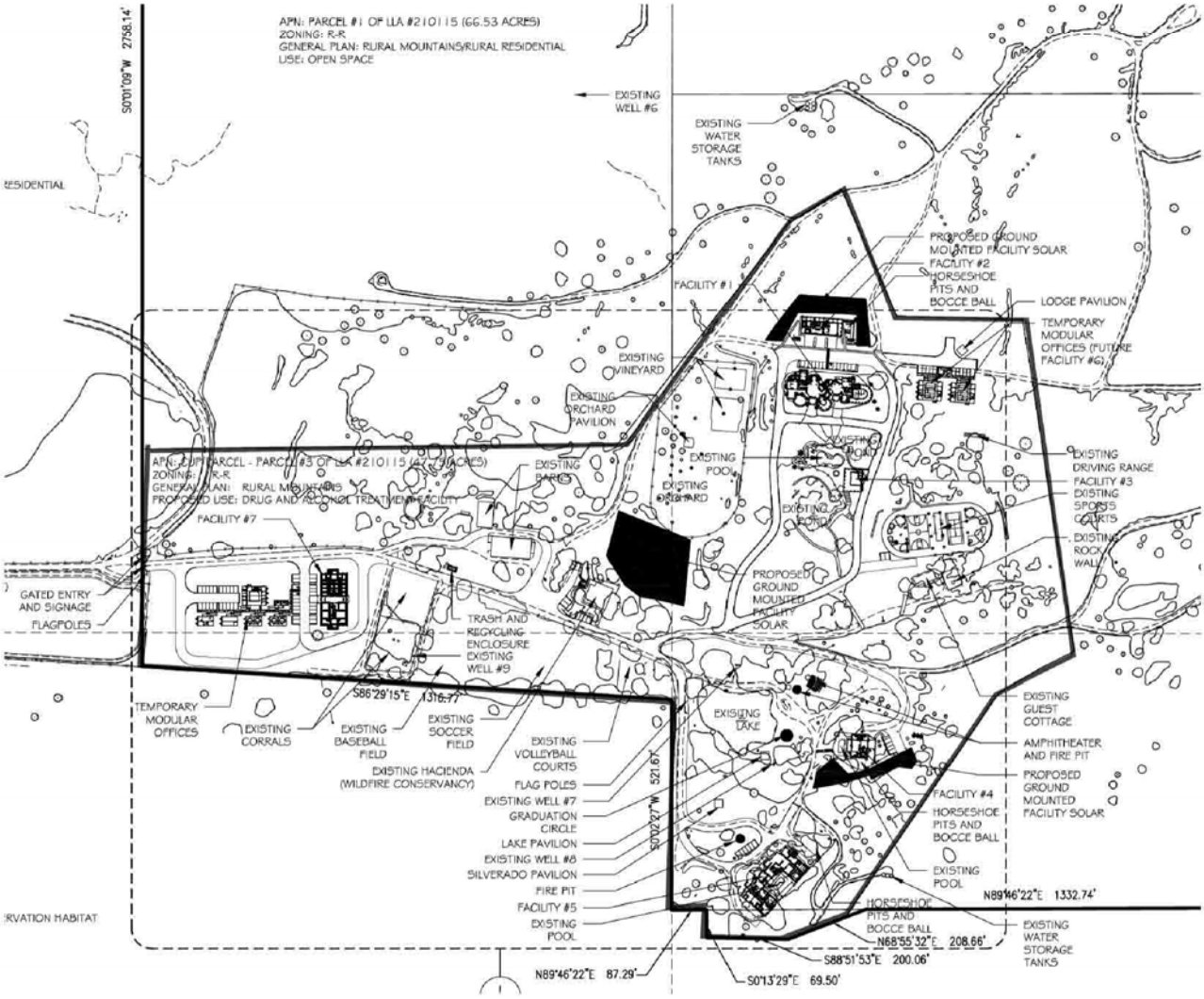


Legend:

= Project Site Boundary

N

Exhibit B
Site Plan



N

Appendices

Appendix A

Daily Emissions Calculations Output
(CalEEMod)

Paradise Valley Ranch AQ & GHG Analysis - Construction Analyis for the Proposed Addition

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	3.00	Dwelling Unit	0.46	20,353.00	9
General Office Building	16.78	1000sqft	0.39	16,777.00	0
Other Non-Asphalt Surfaces	51.40	Acre	51.40	2,238,984.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Paradise Valley Ranch AQ & GHG Analysis - Construction Analyis for the Proposed Addition - Riverside-South Coast County, Summer

Project Characteristics - The project is proposing to use SoCal Edison/private solar for electricity.

Land Use - The project is proposed to construct and operate approximately 37.13 TSF of additional facility to the west coast "Center of Excellence". The project is also proposing to develop 51.4 aacre of the land into a solar installations.

Construction Phase - The project construction phases are adjusted to meet project's opening year 2022.

Grading -

Vehicle Trips - No operational mobile emission are estimated in this CalEEMod analysis.

Woodstoves - No operational emission are estimated in this CalEEMod analysis.

Energy Use - No operational emission are estimated in this CalEEMod analysis.

Water And Wastewater - No operational emission are estimated in this CalEEMod analysis.

Solid Waste - No operational emission are estimated in this CalEEMod analysis.

Construction Off-road Equipment Mitigation - The project will be required to comply with SCAQMD Rule 403 regarding fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	1,110.00	250.00
tblConstructionPhase	NumDays	110.00	20.00
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	40.00	20.00
tblConstructionPhase	PhaseEndDate	5/4/2027	12/6/2022
tblConstructionPhase	PhaseEndDate	10/6/2026	10/11/2022
tblConstructionPhase	PhaseEndDate	7/5/2022	10/26/2021
tblConstructionPhase	PhaseEndDate	1/19/2027	11/8/2022
tblConstructionPhase	PhaseEndDate	2/1/2022	9/28/2021
tblConstructionPhase	PhaseStartDate	1/20/2027	11/9/2022
tblConstructionPhase	PhaseStartDate	7/6/2022	10/27/2021
tblConstructionPhase	PhaseStartDate	2/2/2022	9/29/2021

tblConstructionPhase	PhaseStartDate	10/7/2026	10/12/2022
tblConstructionPhase	PhaseStartDate	12/8/2021	9/1/2021
tblEnergyUse	LightingElect	3.66	0.00
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	2.79	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24NG	6,030.00	0.00
tblEnergyUse	T24E	3.07	0.00
tblEnergyUse	T24E	951.67	0.00
tblEnergyUse	T24NG	3.47	0.00
tblEnergyUse	T24NG	24,566.15	0.00
tblLandUse	LandUseSquareFeet	5,400.00	20,353.00
tblLandUse	LotAcreage	0.97	0.46
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	15.61	0.00
tblSolidWaste	SolidWasteGenerationRate	3.69	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	9.52	0.00
tblWater	IndoorWaterUseRate	2,982,372.29	0.00
tblWater	IndoorWaterUseRate	195,462.08	0.00
tblWater	OutdoorWaterUseRate	1,827,905.60	0.00
tblWater	OutdoorWaterUseRate	123,226.09	0.00

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	8.3983	56.4398	68.9110	0.2682	18.3372	2.0460	20.3832	10.0025	1.8823	11.8849	0.0000	27,203.9729	27,203.9729	1.9495	0.0000	27,245.7687
2022	46.5256	52.1695	64.7126	0.2622	16.9655	0.9507	17.9163	4.5603	0.8939	5.4542	0.0000	26,616.4712	26,616.4712	1.5970	0.0000	26,656.3968
Maximum	**46.5256**	**56.4398**	**68.9110**	**0.2682**	**18.3372**	**2.0460**	**20.3832**	**10.0025**	**1.8823**	**11.8849**	**0.0000**	**27,203.9729**	**27,203.9729**	**1.9495**	**0.0000**	**27,245.7687**

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	8.3983	56.4398	68.9110	0.2682	16.9656	2.0460	18.0798	4.5604	1.8823	5.7527	0.0000	27,203.9729	27,203.9729	1.9495	0.0000	27,245.7687
2022	46.5256	52.1695	64.7126	0.2622	16.9655	0.9507	17.9163	4.5603	0.8939	5.4542	0.0000	26,616.4712	26,616.4712	1.5970	0.0000	26,656.3968
Maximum	**46.5256**	**56.4398**	**68.9110**	**0.2682**	**16.9656**	**2.0460**	**18.0798**	**4.5604**	**1.8823**	**5.7527**	**0.0000**	**27,203.9729**	**27,203.9729**	**1.9495**	**0.0000**	**27,245.7687**

Paradise Valley Ranch AQ & GHG Analysis - Construction Analyis for the Proposed Addition - Riverside-South Coast County, Summer

	ROG	NOx	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	3.89	0.00	6.01	37.37	0.00	35.37	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	2.5706	0.0652	1.7804	3.9100e-003		0.2306	0.2306		0.2306	0.2306	28.1008	54.4606	82.5613	0.0843	1.9100e-003	85.2365
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**2.5706**	**0.0652**	**1.7804**	**3.9100e-003**	**0.0000**	**0.2306**	**0.2306**	**0.0000**	**0.2306**	**0.2306**	**28.1008**	**54.4606**	**82.5613**	**0.0843**	**1.9100e-003**	**85.2365**

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	2.5706	0.0652	1.7804	3.9100e-003		0.2306	0.2306		0.2306	0.2306	28.1008	54.4606	82.5613	0.0843	1.9100e-003	85.2365
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**2.5706**	**0.0652**	**1.7804**	**3.9100e-003**	**0.0000**	**0.2306**	**0.2306**	**0.0000**	**0.2306**	**0.2306**	**28.1008**	**54.4606**	**82.5613**	**0.0843**	**1.9100e-003**	**85.2365**

	ROG	NOx	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	Site Preparation	Site Preparation	9/1/2021	9/28/2021	5	20	
2	Grading	Grading	9/29/2021	10/26/2021	5	20	
3	Building Construction	Building Construction	10/27/2021	10/11/2022	5	250	
4	Paving	Paving	10/12/2022	11/8/2022	5	20	
5	Architectural Coating	Architectural Coating	11/9/2022	12/6/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 50

Acres of Paving: 51.4

Residential Indoor: 41,215; Residential Outdoor: 13,738; Non-Residential Indoor: 25,166; Non-Residential Outdoor: 8,389; Striped Parking Area: 134,339 (Architectural Coating – sqft)

OffRoad Equipment

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

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
Site Preparation	7	18.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	947.00	370.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	189.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1062	0.0638	0.8729	2.5800e-003	0.2709	1.5600e-003	0.2725	0.0719	1.4300e-003	0.0733		256.7716	256.7716	6.0400e-003		256.9225
Total	**0.1062**	**0.0638**	**0.8729**	**2.5800e-003**	**0.2709**	**1.5600e-003**	**0.2725**	**0.0719**	**1.4300e-003**	**0.0733**		**256.7716**	**256.7716**	**6.0400e-003**		**256.9225**

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					6.9103	0.0000	6.9103	3.7985	0.0000	3.7985			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**6.9103**	**2.0445**	**8.9548**	**3.7985**	**1.8809**	**5.6794**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1062	0.0638	0.8729	2.5800e-003	0.2709	1.5600e-003	0.2725	0.0719	1.4300e-003	0.0733		256.7716	256.7716	6.0400e-003		256.9225
Total	**0.1062**	**0.0638**	**0.8729**	**2.5800e-003**	**0.2709**	**1.5600e-003**	**0.2725**	**0.0719**	**1.4300e-003**	**0.0733**		**256.7716**	**256.7716**	**6.0400e-003**		**256.9225**

3.3 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.3 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	0.1180	0.0709	0.9699	2.8600e-003	0.3010	1.7300e-003	0.3028	0.0798	1.5900e-003	0.0814		285.3018	285.3018	6.7100e-003		285.4695
Total	**0.1180**	**0.0709**	**0.9699**	**2.8600e-003**	**0.3010**	**1.7300e-003**	**0.3028**	**0.0798**	**1.5900e-003**	**0.0814**		**285.3018**	**285.3018**	**6.7100e-003**		**285.4695**

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					3.3176	0.0000	3.3176	1.3757	0.0000	1.3757			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**3.3176**	**1.9853**	**5.3029**	**1.3757**	**1.8265**	**3.2022**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.3 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	0.1180	0.0709	0.9699	2.8600e-003	0.3010	1.7300e-003	0.3028	0.0798	1.5900e-003	0.0814		285.3018	285.3018	6.7100e-003		285.4695
Total	**0.1180**	**0.0709**	**0.9699**	**2.8600e-003**	**0.3010**	**1.7300e-003**	**0.3028**	**0.0798**	**1.5900e-003**	**0.0814**		**285.3018**	**285.3018**	**6.7100e-003**		**285.4695**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.9119	35.6530	6.4094	0.1057	2.7112	0.0736	2.7848	0.7805	0.0704	0.8508		11,141.5710	11,141.5710	0.7382		11,160.0253
Worker	5.5854	3.3547	45.9264	0.1356	14.2544	0.0820	14.3364	3.7799	0.0755	3.8554		13,509.0380	13,509.0380	0.3177		13,516.9792
Total	**6.4973**	**39.0077**	**52.3358**	**0.2412**	**16.9656**	**0.1556**	**17.1212**	**4.5604**	**0.1459**	**4.7062**		**24,650.6090**	**24,650.6090**	**1.0558**		**24,677.0045**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.9119	35.6530	6.4094	0.1057	2.7112	0.0736	2.7848	0.7805	0.0704	0.8508		11,141.5710	11,141.5710	0.7382		11,160.0253
Worker	5.5854	3.3547	45.9264	0.1356	14.2544	0.0820	14.3364	3.7799	0.0755	3.8554		13,509.0380	13,509.0380	0.3177		13,516.9792
Total	**6.4973**	**39.0077**	**52.3358**	**0.2412**	**16.9656**	**0.1556**	**17.1212**	**4.5604**	**0.1459**	**4.7062**		**24,650.6090**	**24,650.6090**	**1.0558**		**24,677.0045**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.8506	33.5334	5.9646	0.1047	2.7111	0.0619	2.7730	0.7804	0.0592	0.8397		11,046.9069	11,046.9069	0.6997		11,064.3984
Worker	5.2307	3.0205	42.3846	0.1306	14.2544	0.0798	14.3342	3.7799	0.0735	3.8534		13,015.2307	13,015.2307	0.2854		13,022.3662
Total	**6.0812**	**36.5539**	**48.3492**	**0.2353**	**16.9655**	**0.1417**	**17.1072**	**4.5603**	**0.1327**	**4.6930**		**24,062.1376**	**24,062.1376**	**0.9851**		**24,086.7646**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.8506	33.5334	5.9646	0.1047	2.7111	0.0619	2.7730	0.7804	0.0592	0.8397		11,046.9069	11,046.9069	0.6997		11,064.3984
Worker	5.2307	3.0205	42.3846	0.1306	14.2544	0.0798	14.3342	3.7799	0.0735	3.8534		13,015.2307	13,015.2307	0.2854		13,022.3662
Total	**6.0812**	**36.5539**	**48.3492**	**0.2353**	**16.9655**	**0.1417**	**17.1072**	**4.5603**	**0.1327**	**4.6930**		**24,062.1376**	**24,062.1376**	**0.9851**		**24,086.7646**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0829	0.0478	0.6714	2.0700e-003	0.2258	1.2600e-003	0.2271	0.0599	1.1600e-003	0.0610		206.1547	206.1547	4.5200e-003		206.2677
Total	**0.0829**	**0.0478**	**0.6714**	**2.0700e-003**	**0.2258**	**1.2600e-003**	**0.2271**	**0.0599**	**1.1600e-003**	**0.0610**		**206.1547**	**206.1547**	**4.5200e-003**		**206.2677**

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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0829	0.0478	0.6714	2.0700e-003	0.2258	1.2600e-003	0.2271	0.0599	1.1600e-003	0.0610		206.1547	206.1547	4.5200e-003		206.2677
Total	**0.0829**	**0.0478**	**0.6714**	**2.0700e-003**	**0.2258**	**1.2600e-003**	**0.2271**	**0.0599**	**1.1600e-003**	**0.0610**		**206.1547**	**206.1547**	**4.5200e-003**		**206.2677**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	45.2771					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**45.4817**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	1.0439	0.6028	8.4590	0.0261	2.8449	0.0159	2.8608	0.7544	0.0147	0.7691		2,597.5487	2,597.5487	0.0570		2,598.9728
Total	**1.0439**	**0.6028**	**8.4590**	**0.0261**	**2.8449**	**0.0159**	**2.8608**	**0.7544**	**0.0147**	**0.7691**		**2,597.5487**	**2,597.5487**	**0.0570**		**2,598.9728**

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	45.2771					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**45.4817**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	1.0439	0.6028	8.4590	0.0261	2.8449	0.0159	2.8608	0.7544	0.0147	0.7691		2,597.5487	2,597.5487	0.0570		2,598.9728
Total	**1.0439**	**0.6028**	**8.4590**	**0.0261**	**2.8449**	**0.0159**	**2.8608**	**0.7544**	**0.0147**	**0.7691**		**2,597.5487**	**2,597.5487**	**0.0570**		**2,598.9728**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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	18.50	10.10	7.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	18.50	10.10	7.90	0.00	0.00	0.00	0	0	0
Single Family Housing	19.80	9.60	12.90	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Non-Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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	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
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.5706	0.0652	1.7804	3.9100e-003		0.2306	0.2306		0.2306	0.2306	28.1008	54.4606	82.5613	0.0843	1.9100e-003	85.2365
Unmitigated	2.5706	0.0652	1.7804	3.9100e-003		0.2306	0.2306		0.2306	0.2306	28.1008	54.4606	82.5613	0.0843	1.9100e-003	85.2365

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	0.2481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7861	0.0622	1.5257	3.8900e-003		0.2292	0.2292		0.2292	0.2292	28.1008	54.0000	82.1008	0.0838	1.9100e-003	84.7642
Landscaping	8.1300e-003	2.9200e-003	0.2547	1.0000e-005		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003		0.4606	0.4606	4.7000e-004		0.4723
Total	**2.5706**	**0.0652**	**1.7804**	**3.9000e-003**		**0.2306**	**0.2306**		**0.2306**	**0.2306**	**28.1008**	**54.4606**	**82.5613**	**0.0843**	**1.9100e-003**	**85.2365**

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	0.2481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7861	0.0622	1.5257	3.8900e-003		0.2292	0.2292		0.2292	0.2292	28.1008	54.0000	82.1008	0.0838	1.9100e-003	84.7642
Landscaping	8.1300e-003	2.9200e-003	0.2547	1.0000e-005		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003		0.4606	0.4606	4.7000e-004		0.4723
Total	**2.5706**	**0.0652**	**1.7804**	**3.9000e-003**		**0.2306**	**0.2306**		**0.2306**	**0.2306**	**28.1008**	**54.4606**	**82.5613**	**0.0843**	**1.9100e-003**	**85.2365**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Paradise Valley Ranch AQ & GHG Analysis - Construction Analyis for the Proposed Addition

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	3.00	Dwelling Unit	0.46	20,353.00	9
General Office Building	16.78	1000sqft	0.39	16,777.00	0
Other Non-Asphalt Surfaces	51.40	Acre	51.40	2,238,984.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Paradise Valley Ranch AQ & GHG Analysis - Construction Analyis for the Proposed Addition - Riverside-South Coast County, Winter

Project Characteristics - The project is proposing to use SoCal Edison/private solar for electricity.

Land Use - The project is proposed to construct and operate approximately 37.13 TSF of additional facility to the west coast "Center of Excellence". The project is also proposing to develop 51.4 aacre of the land into a solar installations.

Construction Phase - The project construction phases are adjusted to meet project's opening year 2022.

Grading -

Vehicle Trips - No operational mobile emission are estimated in this CalEEMod analysis.

Woodstoves - No operational emission are estimated in this CalEEMod analysis.

Energy Use - No operational emission are estimated in this CalEEMod analysis.

Water And Wastewater - No operational emission are estimated in this CalEEMod analysis.

Solid Waste - No operational emission are estimated in this CalEEMod analysis.

Construction Off-road Equipment Mitigation - The project will be required to comply with SCAQMD Rule 403 regarding fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	1,110.00	250.00
tblConstructionPhase	NumDays	110.00	20.00
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	40.00	20.00
tblConstructionPhase	PhaseEndDate	5/4/2027	12/6/2022
tblConstructionPhase	PhaseEndDate	10/6/2026	10/11/2022
tblConstructionPhase	PhaseEndDate	7/5/2022	10/26/2021
tblConstructionPhase	PhaseEndDate	1/19/2027	11/8/2022
tblConstructionPhase	PhaseEndDate	2/1/2022	9/28/2021
tblConstructionPhase	PhaseStartDate	1/20/2027	11/9/2022
tblConstructionPhase	PhaseStartDate	7/6/2022	10/27/2021
tblConstructionPhase	PhaseStartDate	2/2/2022	9/29/2021

tblConstructionPhase	PhaseStartDate	10/7/2026	10/12/2022
tblConstructionPhase	PhaseStartDate	12/8/2021	9/1/2021
tblEnergyUse	LightingElect	3.66	0.00
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	2.79	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24NG	6,030.00	0.00
tblEnergyUse	T24E	3.07	0.00
tblEnergyUse	T24E	951.67	0.00
tblEnergyUse	T24NG	3.47	0.00
tblEnergyUse	T24NG	24,566.15	0.00
tblLandUse	LandUseSquareFeet	5,400.00	20,353.00
tblLandUse	LotAcreage	0.97	0.46
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	15.61	0.00
tblSolidWaste	SolidWasteGenerationRate	3.69	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	9.52	0.00
tblWater	IndoorWaterUseRate	2,982,372.29	0.00
tblWater	IndoorWaterUseRate	195,462.08	0.00
tblWater	OutdoorWaterUseRate	1,827,905.60	0.00
tblWater	OutdoorWaterUseRate	123,226.09	0.00

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	8.4695	56.3344	60.7682	0.2505	18.3372	2.0460	20.3832	10.0025	1.8823	11.8849	0.0000	25,428.6663	25,428.6663	1.9486	0.0000	25,471.4462
2022	46.5320	52.0128	57.1845	0.2451	16.9655	0.9525	17.9180	4.5603	0.8955	5.4559	0.0000	24,893.8383	24,893.8383	1.6375	0.0000	24,934.7756
Maximum	**46.5320**	**56.3344**	**60.7682**	**0.2505**	**18.3372**	**2.0460**	**20.3832**	**10.0025**	**1.8823**	**11.8849**	**0.0000**	**25,428.6663**	**25,428.6663**	**1.9486**	**0.0000**	**25,471.4462**

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	8.4695	56.3344	60.7682	0.2505	16.9656	2.0460	18.0818	4.5604	1.8823	5.7527	0.0000	25,428.6663	25,428.6663	1.9486	0.0000	25,471.4462
2022	46.5320	52.0128	57.1845	0.2451	16.9655	0.9525	17.9180	4.5603	0.8955	5.4559	0.0000	24,893.8383	24,893.8383	1.6375	0.0000	24,934.7756
Maximum	**46.5320**	**56.3344**	**60.7682**	**0.2505**	**16.9656**	**2.0460**	**18.0818**	**4.5604**	**1.8823**	**5.7527**	**0.0000**	**25,428.6663**	**25,428.6663**	**1.9486**	**0.0000**	**25,471.4462**

Paradise Valley Ranch AQ & GHG Analysis - Construction Analyis for the Proposed Addition - Riverside-South Coast County, Winter

	ROG	NOx	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**	**3.89**	**0.00**	**6.01**	**37.37**	**0.00**	**35.36**	**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	2.5706	0.0652	1.7804	3.9100e-003		0.2306	0.2306		0.2306	0.2306	28.1008	54.4606	82.5613	0.0843	1.9100e-003	85.2365
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**2.5706**	**0.0652**	**1.7804**	**3.9100e-003**	**0.0000**	**0.2306**	**0.2306**	**0.0000**	**0.2306**	**0.2306**	**28.1008**	**54.4606**	**82.5613**	**0.0843**	**1.9100e-003**	**85.2365**

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	2.5706	0.0652	1.7804	3.9100e-003		0.2306	0.2306		0.2306	0.2306	28.1008	54.4606	82.5613	0.0843	1.9100e-003	85.2365
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**2.5706**	**0.0652**	**1.7804**	**3.9100e-003**	**0.0000**	**0.2306**	**0.2306**	**0.0000**	**0.2306**	**0.2306**	**28.1008**	**54.4606**	**82.5613**	**0.0843**	**1.9100e-003**	**85.2365**

	ROG	NOx	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	Site Preparation	Site Preparation	9/1/2021	9/28/2021	5	20	
2	Grading	Grading	9/29/2021	10/26/2021	5	20	
3	Building Construction	Building Construction	10/27/2021	10/11/2022	5	250	
4	Paving	Paving	10/12/2022	11/8/2022	5	20	
5	Architectural Coating	Architectural Coating	11/9/2022	12/6/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 50

Acres of Paving: 51.4

Residential Indoor: 41,215; Residential Outdoor: 13,738; Non-Residential Indoor: 25,166; Non-Residential Outdoor: 8,389; Striped Parking Area: 134,339 (Architectural Coating – sqft)

OffRoad Equipment

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

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
Site Preparation	7	18.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	947.00	370.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	189.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1065	0.0659	0.6970	2.3100e-003	0.2709	1.5600e-003	0.2725	0.0719	1.4300e-003	0.0733		230.2557	230.2557	5.2200e-003		230.3861
Total	**0.1065**	**0.0659**	**0.6970**	**2.3100e-003**	**0.2709**	**1.5600e-003**	**0.2725**	**0.0719**	**1.4300e-003**	**0.0733**		**230.2557**	**230.2557**	**5.2200e-003**		**230.3861**

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					6.9103	0.0000	6.9103	3.7985	0.0000	3.7985			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**6.9103**	**2.0445**	**8.9548**	**3.7985**	**1.8809**	**5.6794**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1065	0.0659	0.6970	2.3100e-003	0.2709	1.5600e-003	0.2725	0.0719	1.4300e-003	0.0733		230.2557	230.2557	5.2200e-003		230.3861
Total	**0.1065**	**0.0659**	**0.6970**	**2.3100e-003**	**0.2709**	**1.5600e-003**	**0.2725**	**0.0719**	**1.4300e-003**	**0.0733**		**230.2557**	**230.2557**	**5.2200e-003**		**230.3861**

3.3 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.3 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	0.1183	0.0733	0.7744	2.5700e-003	0.3010	1.7300e-003	0.3028	0.0798	1.5900e-003	0.0814		255.8397	255.8397	5.8000e-003		255.9846
Total	**0.1183**	**0.0733**	**0.7744**	**2.5700e-003**	**0.3010**	**1.7300e-003**	**0.3028**	**0.0798**	**1.5900e-003**	**0.0814**		**255.8397**	**255.8397**	**5.8000e-003**		**255.9846**

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					3.3176	0.0000	3.3176	1.3757	0.0000	1.3757			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**3.3176**	**1.9853**	**5.3029**	**1.3757**	**1.8265**	**3.2022**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.3 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	0.1183	0.0733	0.7744	2.5700e-003	0.3010	1.7300e-003	0.3028	0.0798	1.5900e-003	0.0814		255.8397	255.8397	5.8000e-003		255.9846
Total	**0.1183**	**0.0733**	**0.7744**	**2.5700e-003**	**0.3010**	**1.7300e-003**	**0.3028**	**0.0798**	**1.5900e-003**	**0.0814**		**255.8397**	**255.8397**	**5.8000e-003**		**255.9846**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.9659	35.4332	7.5238	0.1021	2.7112	0.0756	2.7868	0.7805	0.0723	0.8527		10,761.2923	10,761.2923	0.8208		10,781.8114
Worker	5.6027	3.4691	36.6692	0.1215	14.2544	0.0820	14.3364	3.7799	0.0755	3.8554		12,114.0101	12,114.0101	0.2744		12,120.8705
Total	**6.5685**	**38.9023**	**44.1930**	**0.2236**	**16.9656**	**0.1575**	**17.1231**	**4.5604**	**0.1477**	**4.7081**		**22,875.3024**	**22,875.3024**	**1.0952**		**22,902.6819**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.9659	35.4332	7.5238	0.1021	2.7112	0.0756	2.7868	0.7805	0.0723	0.8527		10,761.2923	10,761.2923	0.8208		10,781.8114
Worker	5.6027	3.4691	36.6692	0.1215	14.2544	0.0820	14.3364	3.7799	0.0755	3.8554		12,114.0101	12,114.0101	0.2744		12,120.8705
Total	**6.5685**	**38.9023**	**44.1930**	**0.2236**	**16.9656**	**0.1575**	**17.1231**	**4.5604**	**0.1477**	**4.7081**		**22,875.3024**	**22,875.3024**	**1.0952**		**22,902.6819**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.9021	33.2749	7.0258	0.1011	2.7111	0.0637	2.7748	0.7804	0.0609	0.8413		10,667.7294	10,667.7294	0.7787		10,687.1961
Worker	5.2629	3.1223	33.7954	0.1170	14.2544	0.0798	14.3342	3.7799	0.0735	3.8534		11,671.7754	11,671.7754	0.2469		11,677.9473
Total	**6.1650**	**36.3972**	**40.8211**	**0.2182**	**16.9655**	**0.1435**	**17.1090**	**4.5603**	**0.1344**	**4.6947**		**22,339.5047**	**22,339.5047**	**1.0256**		**22,365.1434**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.9021	33.2749	7.0258	0.1011	2.7111	0.0637	2.7748	0.7804	0.0609	0.8413		10,667.7294	10,667.7294	0.7787		10,687.1961
Worker	5.2629	3.1223	33.7954	0.1170	14.2544	0.0798	14.3342	3.7799	0.0735	3.8534		11,671.7754	11,671.7754	0.2469		11,677.9473
Total	**6.1650**	**36.3972**	**40.8211**	**0.2182**	**16.9655**	**0.1435**	**17.1090**	**4.5603**	**0.1344**	**4.6947**		**22,339.5047**	**22,339.5047**	**1.0256**		**22,365.1434**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0834	0.0495	0.5353	1.8500e-003	0.2258	1.2600e-003	0.2271	0.0599	1.1600e-003	0.0610		184.8750	184.8750	3.9100e-003		184.9728
Total	**0.0834**	**0.0495**	**0.5353**	**1.8500e-003**	**0.2258**	**1.2600e-003**	**0.2271**	**0.0599**	**1.1600e-003**	**0.0610**		**184.8750**	**184.8750**	**3.9100e-003**		**184.9728**

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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0834	0.0495	0.5353	1.8500e-003	0.2258	1.2600e-003	0.2271	0.0599	1.1600e-003	0.0610		184.8750	184.8750	3.9100e-003		184.9728
Total	**0.0834**	**0.0495**	**0.5353**	**1.8500e-003**	**0.2258**	**1.2600e-003**	**0.2271**	**0.0599**	**1.1600e-003**	**0.0610**		**184.8750**	**184.8750**	**3.9100e-003**		**184.9728**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	45.2771					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**45.4817**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	1.0504	0.6231	6.7448	0.0234	2.8449	0.0159	2.8608	0.7544	0.0147	0.7691		2,329.4251	2,329.4251	0.0493		2,330.6569
Total	**1.0504**	**0.6231**	**6.7448**	**0.0234**	**2.8449**	**0.0159**	**2.8608**	**0.7544**	**0.0147**	**0.7691**		**2,329.4251**	**2,329.4251**	**0.0493**		**2,330.6569**

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	45.2771					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**45.4817**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	1.0504	0.6231	6.7448	0.0234	2.8449	0.0159	2.8608	0.7544	0.0147	0.7691		2,329.4251	2,329.4251	0.0493		2,330.6569
Total	**1.0504**	**0.6231**	**6.7448**	**0.0234**	**2.8449**	**0.0159**	**2.8608**	**0.7544**	**0.0147**	**0.7691**		**2,329.4251**	**2,329.4251**	**0.0493**		**2,330.6569**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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	18.50	10.10	7.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	18.50	10.10	7.90	0.00	0.00	0.00	0	0	0
Single Family Housing	19.80	9.60	12.90	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Non-Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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	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
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.5706	0.0652	1.7804	3.9100e-003		0.2306	0.2306		0.2306	0.2306	28.1008	54.4606	82.5613	0.0843	1.9100e-003	85.2365
Unmitigated	2.5706	0.0652	1.7804	3.9100e-003		0.2306	0.2306		0.2306	0.2306	28.1008	54.4606	82.5613	0.0843	1.9100e-003	85.2365

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	0.2481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7861	0.0622	1.5257	3.8900e-003		0.2292	0.2292		0.2292	0.2292	28.1008	54.0000	82.1008	0.0838	1.9100e-003	84.7642
Landscaping	8.1300e-003	2.9200e-003	0.2547	1.0000e-005		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003		0.4606	0.4606	4.7000e-004		0.4723
Total	**2.5706**	**0.0652**	**1.7804**	**3.9000e-003**		**0.2306**	**0.2306**		**0.2306**	**0.2306**	**28.1008**	**54.4606**	**82.5613**	**0.0843**	**1.9100e-003**	**85.2365**

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	0.2481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7861	0.0622	1.5257	3.8900e-003		0.2292	0.2292		0.2292	0.2292	28.1008	54.0000	82.1008	0.0838	1.9100e-003	84.7642
Landscaping	8.1300e-003	2.9200e-003	0.2547	1.0000e-005		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003		0.4606	0.4606	4.7000e-004		0.4723
Total	**2.5706**	**0.0652**	**1.7804**	**3.9000e-003**		**0.2306**	**0.2306**		**0.2306**	**0.2306**	**28.1008**	**54.4606**	**82.5613**	**0.0843**	**1.9100e-003**	**85.2365**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Paradise Valley Ranch AQ & GHG Analysis - Operational Emisson Analyis for full Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	16.78	1000sqft	0.39	16,777.00	0
Single Family Housing	8.00	Dwelling Unit	1.04	45,459.00	23
City Park	4.00	Acre	4.00	174,240.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - The project is proposing to use SoCal Edison/private solar for electricity.

Land Use - The project is proposed to construct and operate approximately 69.146 TSF of additional facility to the west coast "Center of Excellence". Since the proposed project is considered unique and CalEEMod does not have a specific land use type for this project, "Land Use-SFR", has been used as it closely relates to the proposed project's operation.

Construction Phase - No construction analysis has been analyzed in this CalEEMod run.

Vehicle Trips - Trip rates are based on Paradise Valley Ranch Project Traffic Assessment Scoping Agreement, January 2021, by RK Engneering Group.

Woodstoves - . Per SCAQMD rule 445, no wood burning devices are allowed in new developments; therefore, no wood hearths are included in this project.

Energy Use - Energy usage added to account for outdoor lighting, etc. 0.35 KHhr/SF/year

Paradise Valley Ranch AQ & GHG Analysis - Operational Emisson Analyis for full Project - Riverside-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	0.00	0.35
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	0.40	0.00
tblLandUse	LandUseSquareFeet	14,400.00	45,459.00
tblLandUse	LotAcreage	2.60	1.04
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	9.91	28.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	8.62	28.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	9.52	28.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

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	3.2536	31.4938	22.2925	0.0410	0.2258	1.5526	1.7784	0.0599	1.4423	1.5022	0.0000	3,961.9213	3,961.9213	1.0599	0.0000	3,988.4195
Maximum	**3.2536**	**31.4938**	**22.2925**	**0.0410**	**0.2258**	**1.5526**	**1.7784**	**0.0599**	**1.4423**	**1.5022**	**0.0000**	**3,961.9213**	**3,961.9213**	**1.0599**	**0.0000**	**3,988.4195**

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	3.2536	31.4938	22.2925	0.0410	0.2258	1.5526	1.7784	0.0599	1.4423	1.5022	0.0000	3,961.9213	3,961.9213	1.0599	0.0000	3,988.4195
Maximum	**3.2536**	**31.4938**	**22.2925**	**0.0410**	**0.2258**	**1.5526**	**1.7784**	**0.0599**	**1.4423**	**1.5022**	**0.0000**	**3,961.9213**	**3,961.9213**	**1.0599**	**0.0000**	**3,988.4195**

	ROG	NOx	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**

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	1.5492	0.1204	0.7109	7.6000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	145.1930	145.1930	3.9200e-003	2.6400e-003	146.0777
Energy	8.9500e-003	0.0774	0.0394	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003		97.6585	97.6585	1.8700e-003	1.7900e-003	98.2388
Mobile	0.5033	3.7929	7.5773	0.0335	2.6152	0.0220	2.6372	0.6997	0.0206	0.7203		3,419.0633	3,419.0633	0.1354		3,422.4483
Total	**2.0614**	**3.9908**	**8.3276**	**0.0348**	**2.6152**	**0.0409**	**2.6562**	**0.6997**	**0.0396**	**0.7393**	**0.0000**	**3,661.9147**	**3,661.9147**	**0.1412**	**4.4300e-003**	**3,666.7647**

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	1.5492	0.1204	0.7109	7.6000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	145.1930	145.1930	3.9200e-003	2.6400e-003	146.0777
Energy	8.9500e-003	0.0774	0.0394	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003		97.6585	97.6585	1.8700e-003	1.7900e-003	98.2388
Mobile	0.5033	3.7929	7.5773	0.0335	2.6152	0.0220	2.6372	0.6997	0.0206	0.7203		3,419.0633	3,419.0633	0.1354		3,422.4483
Total	**2.0614**	**3.9908**	**8.3276**	**0.0348**	**2.6152**	**0.0409**	**2.6562**	**0.6997**	**0.0396**	**0.7393**	**0.0000**	**3,661.9147**	**3,661.9147**	**0.1412**	**4.4300e-003**	**3,666.7647**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	9/28/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

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	0.0885	0.0531	0.7275	2.1500e-003	0.2258	1.3000e-003	0.2271	0.0599	1.2000e-003	0.0611		213.9763	213.9763	5.0300e-003		214.1021
Total	**0.0885**	**0.0531**	**0.7275**	**2.1500e-003**	**0.2258**	**1.3000e-003**	**0.2271**	**0.0599**	**1.2000e-003**	**0.0611**		**213.9763**	**213.9763**	**5.0300e-003**		**214.1021**

3.2 Demolition - 2021

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	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

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	0.0885	0.0531	0.7275	2.1500e-003	0.2258	1.3000e-003	0.2271	0.0599	1.2000e-003	0.0611		213.9763	213.9763	5.0300e-003		214.1021
Total	**0.0885**	**0.0531**	**0.7275**	**2.1500e-003**	**0.2258**	**1.3000e-003**	**0.2271**	**0.0599**	**1.2000e-003**	**0.0611**		**213.9763**	**213.9763**	**5.0300e-003**		**214.1021**

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	0.5033	3.7929	7.5773	0.0335	2.6152	0.0220	2.6372	0.6997	0.0206	0.7203		3,419.0633	3,419.0633	0.1354		3,422.4483
Unmitigated	0.5033	3.7929	7.5773	0.0335	2.6152	0.0220	2.6372	0.6997	0.0206	0.7203		3,419.0633	3,419.0633	0.1354		3,422.4483

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Single Family Housing	224.00	224.00	224.00	1,226,318	1,226,318
Total	224.00	224.00	224.00	1,226,318	1,226,318

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
City Park	18.50	10.10	7.90	33.00	48.00	19.00	66	28	6
General Office Building	18.50	10.10	7.90	33.00	48.00	19.00	77	19	4
Single Family Housing	19.80	9.60	12.90	40.20	19.20	40.60	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
General Office Building	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

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	8.9500e-003	0.0774	0.0394	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003		97.6585	97.6585	1.8700e-003	1.7900e-003	98.2388
NaturalGas Unmitigated	8.9500e-003	0.0774	0.0394	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003		97.6585	97.6585	1.8700e-003	1.7900e-003	98.2388

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					
City Park	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
General Office Building	159.496	1.7200e-003	0.0156	0.0131	9.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003		18.7643	18.7643	3.6000e-004	3.4000e-004	18.8758
Single Family Housing	670.601	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Total		**8.9500e-003**	**0.0774**	**0.0394**	**4.8000e-004**		**6.1900e-003**	**6.1900e-003**		**6.1900e-003**	**6.1900e-003**		**97.6585**	**97.6585**	**1.8700e-003**	**1.7900e-003**	**98.2388**

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					
City Park	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
General Office Building	0.159496	1.7200e-003	0.0156	0.0131	9.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003		18.7643	18.7643	3.6000e-004	3.4000e-004	18.8758
Single Family Housing	0.670601	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Total		**8.9500e-003**	**0.0774**	**0.0394**	**4.8000e-004**		**6.1900e-003**	**6.1900e-003**		**6.1900e-003**	**6.1900e-003**		**97.6585**	**97.6585**	**1.8700e-003**	**1.7900e-003**	**98.2388**

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	1.5492	0.1204	0.7109	7.6000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	145.1930	145.1930	3.9200e-003	2.6400e-003	146.0777
Unmitigated	1.5492	0.1204	0.7109	7.6000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	145.1930	145.1930	3.9200e-003	2.6400e-003	146.0777

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	0.1381					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3777					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0132	0.1128	0.0480	7.2000e-004		9.1200e-003	9.1200e-003		9.1200e-003	9.1200e-003	0.0000	144.0000	144.0000	2.7600e-003	2.6400e-003	144.8557
Landscaping	0.0202	7.6400e-003	0.6629	4.0000e-005		3.6600e-003	3.6600e-003		3.6600e-003	3.6600e-003		1.1930	1.1930	1.1600e-003		1.2219
Total	**1.5492**	**0.1204**	**0.7109**	**7.6000e-004**		**0.0128**	**0.0128**		**0.0128**	**0.0128**	**0.0000**	**145.1930**	**145.1930**	**3.9200e-003**	**2.6400e-003**	**146.0777**

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	0.1381					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3777					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0132	0.1128	0.0480	7.2000e-004		9.1200e-003	9.1200e-003		9.1200e-003	9.1200e-003	0.0000	144.0000	144.0000	2.7600e-003	2.6400e-003	144.8557
Landscaping	0.0202	7.6400e-003	0.6629	4.0000e-005		3.6600e-003	3.6600e-003		3.6600e-003	3.6600e-003		1.1930	1.1930	1.1600e-003		1.2219
Total	**1.5492**	**0.1204**	**0.7109**	**7.6000e-004**		**0.0128**	**0.0128**		**0.0128**	**0.0128**	**0.0000**	**145.1930**	**145.1930**	**3.9200e-003**	**2.6400e-003**	**146.0777**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Paradise Valley Ranch AQ & GHG Analysis - Operational Emisson Analyis for full Project

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	16.78	1000sqft	0.39	16,777.00	0
Single Family Housing	8.00	Dwelling Unit	1.04	45,459.00	23
City Park	4.00	Acre	4.00	174,240.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - The project is proposing to use SoCal Edison/private solar for electricity.

Land Use - The project is proposed to construct and operate approximately 69.146 TSF of additional facility to the west coast "Center of Excellence". Since the proposed project is considered unique and CalEEMod does not have a specific land use type for this project, "Land Use-SFR", has been used as it closely relates to the proposed project's operation.

Construction Phase - No construction analysis has been analyzed in this CalEEMod run.

Vehicle Trips - Trip rates are based on Paradise Valley Ranch Project Traffic Assessment Scoping Agreement, January 2021, by RK Engneering Group.

Woodstoves - . Per SCAQMD rule 445, no wood burning devices are allowed in new developments; therefore, no wood hearths are included in this project.

Energy Use - Energy usage added to account for outdoor lighting, etc. 0.35 KHhr/SF/year

Paradise Valley Ranch AQ & GHG Analysis - Operational Emisson Analyis for full Project - Riverside-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	0.00	0.35
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	0.40	0.00
tblLandUse	LandUseSquareFeet	14,400.00	45,459.00
tblLandUse	LotAcreage	2.60	1.04
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	9.91	28.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	8.62	28.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	9.52	28.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

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	3.2539	31.4956	22.1458	0.0407	0.2258	1.5526	1.7784	0.0599	1.4423	1.5022	0.0000	3,939.8247	3,939.8247	1.0593	0.0000	3,966.3058
Maximum	**3.2539**	**31.4956**	**22.1458**	**0.0407**	**0.2258**	**1.5526**	**1.7784**	**0.0599**	**1.4423**	**1.5022**	**0.0000**	**3,939.8247**	**3,939.8247**	**1.0593**	**0.0000**	**3,966.3058**

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	3.2539	31.4956	22.1458	0.0407	0.2258	1.5526	1.7784	0.0599	1.4423	1.5022	0.0000	3,939.8247	3,939.8247	1.0593	0.0000	3,966.3058
Maximum	**3.2539**	**31.4956**	**22.1458**	**0.0407**	**0.2258**	**1.5526**	**1.7784**	**0.0599**	**1.4423**	**1.5022**	**0.0000**	**3,939.8247**	**3,939.8247**	**1.0593**	**0.0000**	**3,966.3058**

	ROG	NOx	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**

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	1.5492	0.1204	0.7109	7.6000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	145.1930	145.1930	3.9200e-003	2.6400e-003	146.0777
Energy	8.9500e-003	0.0774	0.0394	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003		97.6585	97.6585	1.8700e-003	1.7900e-003	98.2388
Mobile	0.4342	3.8298	6.3813	0.0310	2.6152	0.0221	2.6373	0.6997	0.0207	0.7204		3,165.7909	3,165.7909	0.1366		3,169.2050
Total	**1.9923**	**4.0277**	**7.1315**	**0.0323**	**2.6152**	**0.0411**	**2.6563**	**0.6997**	**0.0397**	**0.7394**	**0.0000**	**3,408.6423**	**3,408.6423**	**0.1424**	**4.4300e-003**	**3,413.5214**

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	1.5492	0.1204	0.7109	7.6000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	145.1930	145.1930	3.9200e-003	2.6400e-003	146.0777
Energy	8.9500e-003	0.0774	0.0394	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003		97.6585	97.6585	1.8700e-003	1.7900e-003	98.2388
Mobile	0.4342	3.8298	6.3813	0.0310	2.6152	0.0221	2.6373	0.6997	0.0207	0.7204		3,165.7909	3,165.7909	0.1366		3,169.2050
Total	**1.9923**	**4.0277**	**7.1315**	**0.0323**	**2.6152**	**0.0411**	**2.6563**	**0.6997**	**0.0397**	**0.7394**	**0.0000**	**3,408.6423**	**3,408.6423**	**0.1424**	**4.4300e-003**	**3,413.5214**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	9/28/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

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	0.0887	0.0550	0.5808	1.9200e-003	0.2258	1.3000e-003	0.2271	0.0599	1.2000e-003	0.0611		191.8798	191.8798	4.3500e-003		191.9885
Total	**0.0887**	**0.0550**	**0.5808**	**1.9200e-003**	**0.2258**	**1.3000e-003**	**0.2271**	**0.0599**	**1.2000e-003**	**0.0611**		**191.8798**	**191.8798**	**4.3500e-003**		**191.9885**

3.2 Demolition - 2021

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	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

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	0.0887	0.0550	0.5808	1.9200e-003	0.2258	1.3000e-003	0.2271	0.0599	1.2000e-003	0.0611		191.8798	191.8798	4.3500e-003		191.9885
Total	**0.0887**	**0.0550**	**0.5808**	**1.9200e-003**	**0.2258**	**1.3000e-003**	**0.2271**	**0.0599**	**1.2000e-003**	**0.0611**		**191.8798**	**191.8798**	**4.3500e-003**		**191.9885**

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	0.4342	3.8298	6.3813	0.0310	2.6152	0.0221	2.6373	0.6997	0.0207	0.7204		3,165.7909	3,165.7909	0.1366		3,169.2050
Unmitigated	0.4342	3.8298	6.3813	0.0310	2.6152	0.0221	2.6373	0.6997	0.0207	0.7204		3,165.7909	3,165.7909	0.1366		3,169.2050

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Single Family Housing	224.00	224.00	224.00	1,226,318	1,226,318
Total	224.00	224.00	224.00	1,226,318	1,226,318

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
City Park	18.50	10.10	7.90	33.00	48.00	19.00	66	28	6
General Office Building	18.50	10.10	7.90	33.00	48.00	19.00	77	19	4
Single Family Housing	19.80	9.60	12.90	40.20	19.20	40.60	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
General Office Building	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

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	8.9500e-003	0.0774	0.0394	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003		97.6585	97.6585	1.8700e-003	1.7900e-003	98.2388
NaturalGas Unmitigated	8.9500e-003	0.0774	0.0394	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003		97.6585	97.6585	1.8700e-003	1.7900e-003	98.2388

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					
City Park	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
General Office Building	159.496	1.7200e-003	0.0156	0.0131	9.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003		18.7643	18.7643	3.6000e-004	3.4000e-004	18.8758
Single Family Housing	670.601	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Total		**8.9500e-003**	**0.0774**	**0.0394**	**4.8000e-004**		**6.1900e-003**	**6.1900e-003**		**6.1900e-003**	**6.1900e-003**		**97.6585**	**97.6585**	**1.8700e-003**	**1.7900e-003**	**98.2388**

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					
City Park	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
General Office Building	0.159496	1.7200e-003	0.0156	0.0131	9.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003		18.7643	18.7643	3.6000e-004	3.4000e-004	18.8758
Single Family Housing	0.670601	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Total		**8.9500e-003**	**0.0774**	**0.0394**	**4.8000e-004**		**6.1900e-003**	**6.1900e-003**		**6.1900e-003**	**6.1900e-003**		**97.6585**	**97.6585**	**1.8700e-003**	**1.7900e-003**	**98.2388**

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	1.5492	0.1204	0.7109	7.6000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	145.1930	145.1930	3.9200e-003	2.6400e-003	146.0777
Unmitigated	1.5492	0.1204	0.7109	7.6000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	145.1930	145.1930	3.9200e-003	2.6400e-003	146.0777

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	0.1381					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3777					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0132	0.1128	0.0480	7.2000e-004		9.1200e-003	9.1200e-003		9.1200e-003	9.1200e-003	0.0000	144.0000	144.0000	2.7600e-003	2.6400e-003	144.8557
Landscaping	0.0202	7.6400e-003	0.6629	4.0000e-005		3.6600e-003	3.6600e-003		3.6600e-003	3.6600e-003		1.1930	1.1930	1.1600e-003		1.2219
Total	**1.5492**	**0.1204**	**0.7109**	**7.6000e-004**		**0.0128**	**0.0128**		**0.0128**	**0.0128**	**0.0000**	**145.1930**	**145.1930**	**3.9200e-003**	**2.6400e-003**	**146.0777**

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	0.1381					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3777					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0132	0.1128	0.0480	7.2000e-004		9.1200e-003	9.1200e-003		9.1200e-003	9.1200e-003	0.0000	144.0000	144.0000	2.7600e-003	2.6400e-003	144.8557
Landscaping	0.0202	7.6400e-003	0.6629	4.0000e-005		3.6600e-003	3.6600e-003		3.6600e-003	3.6600e-003		1.1930	1.1930	1.1600e-003		1.2219
Total	**1.5492**	**0.1204**	**0.7109**	**7.6000e-004**		**0.0128**	**0.0128**		**0.0128**	**0.0128**	**0.0000**	**145.1930**	**145.1930**	**3.9200e-003**	**2.6400e-003**	**146.0777**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Appendix B

Annual Emission Calculations Output
(CalEEMod)

Paradise Valley Ranch AQ & GHG Analysis - Construction Analyis for the Proposed Addition

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	3.00	Dwelling Unit	0.46	20,353.00	9
General Office Building	16.78	1000sqft	0.39	16,777.00	0
Other Non-Asphalt Surfaces	51.40	Acre	51.40	2,238,984.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Paradise Valley Ranch AQ & GHG Analysis - Construction Analyis for the Proposed Addition - Riverside-South Coast County, Annual

Project Characteristics - The project is proposing to use SoCal Edison/private solar for electricity.

Land Use - The project is proposed to construct and operate approximately 37.13 TSF of additional facility to the west coast "Center of Excellence". The project is also proposing to develop 51.4 aacre of the land into a solar installations.

Construction Phase - The project construction phases are adjusted to meet project's opening year 2022.

Grading -

Vehicle Trips - No operational mobile emission are estimated in this CalEEMod analysis.

Woodstoves - No operational emission are estimated in this CalEEMod analysis.

Energy Use - No operational emission are estimated in this CalEEMod analysis.

Water And Wastewater - No operational emission are estimated in this CalEEMod analysis.

Solid Waste - No operational emission are estimated in this CalEEMod analysis.

Construction Off-road Equipment Mitigation - The project will be required to comply with SCAQMD Rule 403 regarding fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	1,110.00	250.00
tblConstructionPhase	NumDays	110.00	20.00
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	40.00	20.00
tblConstructionPhase	PhaseEndDate	5/4/2027	12/6/2022
tblConstructionPhase	PhaseEndDate	10/6/2026	10/11/2022
tblConstructionPhase	PhaseEndDate	7/5/2022	10/26/2021
tblConstructionPhase	PhaseEndDate	1/19/2027	11/8/2022
tblConstructionPhase	PhaseEndDate	2/1/2022	9/28/2021
tblConstructionPhase	PhaseStartDate	1/20/2027	11/9/2022
tblConstructionPhase	PhaseStartDate	7/6/2022	10/27/2021
tblConstructionPhase	PhaseStartDate	2/2/2022	9/29/2021

tblConstructionPhase	PhaseStartDate	10/7/2026	10/12/2022
tblConstructionPhase	PhaseStartDate	12/8/2021	9/1/2021
tblEnergyUse	LightingElect	3.66	0.00
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	2.79	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24NG	6,030.00	0.00
tblEnergyUse	T24E	3.07	0.00
tblEnergyUse	T24E	951.67	0.00
tblEnergyUse	T24NG	3.47	0.00
tblEnergyUse	T24NG	24,566.15	0.00
tblLandUse	LandUseSquareFeet	5,400.00	20,353.00
tblLandUse	LotAcreage	0.97	0.46
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	15.61	0.00
tblSolidWaste	SolidWasteGenerationRate	3.69	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	9.52	0.00
tblWater	IndoorWaterUseRate	2,982,372.29	0.00
tblWater	IndoorWaterUseRate	195,462.08	0.00
tblWater	OutdoorWaterUseRate	1,827,905.60	0.00
tblWater	OutdoorWaterUseRate	123,226.09	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2740	2.2389	2.0309	7.1900e-003	0.6736	0.0671	0.7407	0.2446	0.0623	0.3069	0.0000	657.7184	657.7184	0.0650	0.0000	659.3431
2022	1.2225	5.4504	6.1571	0.0258	1.7160	0.1028	1.8187	0.4618	0.0966	0.5584	0.0000	2,374.6872	2,374.6872	0.1539	0.0000	2,378.5335
Maximum	**1.2225**	**5.4504**	**6.1571**	**0.0258**	**1.7160**	**0.1028**	**1.8187**	**0.4618**	**0.0966**	**0.5584**	**0.0000**	**2,374.6872**	**2,374.6872**	**0.1539**	**0.0000**	**2,378.5335**

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	0.2740	2.2389	2.0309	7.1900e-003	0.5085	0.0671	0.5756	0.1611	0.0623	0.2233	0.0000	657.7182	657.7182	0.0650	0.0000	659.3430
2022	1.2225	5.4504	6.1571	0.0258	1.7160	0.1028	1.8187	0.4618	0.0966	0.5584	0.0000	2,374.6868	2,374.6868	0.1539	0.0000	2,378.5332
Maximum	**1.2225**	**5.4504**	**6.1571**	**0.0258**	**1.7160**	**0.1028**	**1.8187**	**0.4618**	**0.0966**	**0.5584**	**0.0000**	**2,374.6868**	**2,374.6868**	**0.1539**	**0.0000**	**2,378.5332**

	ROG	NOx	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**	**6.91**	**0.00**	**6.45**	**11.83**	**0.00**	**9.65**	**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	**9-1-2021**	**11-30-2021**	1.7634	1.7634
2	**12-1-2021**	**2-28-2022**	1.9793	1.9793
3	**3-1-2022**	**5-31-2022**	1.9692	1.9692
4	**6-1-2022**	**8-31-2022**	1.9700	1.9700
5	**9-1-2022**	**9-30-2022**	0.6424	0.6424
		Highest	1.9793	1.9793

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	0.3350	1.1400e-003	0.0509	5.0000e-005		3.0400e-003	3.0400e-003		3.0400e-003	3.0400e-003	0.3187	0.6646	0.9832	1.0000e-003	2.0000e-005	1.0148
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3350**	**1.1400e-003**	**0.0509**	**5.0000e-005**	**0.0000**	**3.0400e-003**	**3.0400e-003**	**0.0000**	**3.0400e-003**	**3.0400e-003**	**0.3187**	**0.6646**	**0.9832**	**1.0000e-003**	**2.0000e-005**	**1.0148**

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	0.3350	1.1400e-003	0.0509	5.0000e-005		3.0400e-003	3.0400e-003		3.0400e-003	3.0400e-003	0.3187	0.6646	0.9832	1.0000e-003	2.0000e-005	1.0148
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3350**	**1.1400e-003**	**0.0509**	**5.0000e-005**	**0.0000**	**3.0400e-003**	**3.0400e-003**	**0.0000**	**3.0400e-003**	**3.0400e-003**	**0.3187**	**0.6646**	**0.9832**	**1.0000e-003**	**2.0000e-005**	**1.0148**

	ROG	NOx	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	Site Preparation	Site Preparation	9/1/2021	9/28/2021	5	20	
2	Grading	Grading	9/29/2021	10/26/2021	5	20	
3	Building Construction	Building Construction	10/27/2021	10/11/2022	5	250	
4	Paving	Paving	10/12/2022	11/8/2022	5	20	
5	Architectural Coating	Architectural Coating	11/9/2022	12/6/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 50

Acres of Paving: 51.4

Residential Indoor: 41,215; Residential Outdoor: 13,738; Non-Residential Indoor: 25,166; Non-Residential Outdoor: 8,389; Striped Parking Area: 134,339 (Architectural Coating – sqft)

OffRoad Equipment

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

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
Site Preparation	7	18.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	947.00	370.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	189.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8000e-004	6.8000e-004	7.3700e-003	2.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	1.0000e-005	7.2000e-004	0.0000	2.1428	2.1428	5.0000e-005	0.0000	2.1441
Total	**9.8000e-004**	**6.8000e-004**	**7.3700e-003**	**2.0000e-005**	**2.6600e-003**	**2.0000e-005**	**2.6800e-003**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**2.1428**	**2.1428**	**5.0000e-005**	**0.0000**	**2.1441**

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					0.0691	0.0000	0.0691	0.0380	0.0000	0.0380	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.0691**	**0.0204**	**0.0895**	**0.0380**	**0.0188**	**0.0568**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8000e-004	6.8000e-004	7.3700e-003	2.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	1.0000e-005	7.2000e-004	0.0000	2.1428	2.1428	5.0000e-005	0.0000	2.1441
Total	**9.8000e-004**	**6.8000e-004**	**7.3700e-003**	**2.0000e-005**	**2.6600e-003**	**2.0000e-005**	**2.6800e-003**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**2.1428**	**2.1428**	**5.0000e-005**	**0.0000**	**2.1441**

3.3 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					0.0867	0.0000	0.0867	0.0360	0.0000	0.0360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0419	0.4640	0.3088	6.2000e-004		0.0199	0.0199		0.0183	0.0183	0.0000	54.4950	54.4950	0.0176	0.0000	54.9356
Total	**0.0419**	**0.4640**	**0.3088**	**6.2000e-004**	**0.0867**	**0.0199**	**0.1066**	**0.0360**	**0.0183**	**0.0542**	**0.0000**	**54.4950**	**54.4950**	**0.0176**	**0.0000**	**54.9356**

3.3 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	1.0800e-003	7.6000e-004	8.1900e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3809	2.3809	5.0000e-005	0.0000	2.3823
Total	**1.0800e-003**	**7.6000e-004**	**8.1900e-003**	**3.0000e-005**	**2.9600e-003**	**2.0000e-005**	**2.9800e-003**	**7.9000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3809**	**2.3809**	**5.0000e-005**	**0.0000**	**2.3823**

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					0.0332	0.0000	0.0332	0.0138	0.0000	0.0138	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0419	0.4640	0.3088	6.2000e-004		0.0199	0.0199		0.0183	0.0183	0.0000	54.4949	54.4949	0.0176	0.0000	54.9355
Total	**0.0419**	**0.4640**	**0.3088**	**6.2000e-004**	**0.0332**	**0.0199**	**0.0530**	**0.0138**	**0.0183**	**0.0320**	**0.0000**	**54.4949**	**54.4949**	**0.0176**	**0.0000**	**54.9355**

3.3 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	1.0800e-003	7.6000e-004	8.1900e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3809	2.3809	5.0000e-005	0.0000	2.3823
Total	**1.0800e-003**	**7.6000e-004**	**8.1900e-003**	**3.0000e-005**	**2.9600e-003**	**2.0000e-005**	**2.9800e-003**	**7.9000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3809**	**2.3809**	**5.0000e-005**	**0.0000**	**2.3823**

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	0.0456	0.4184	0.3978	6.5000e-004		0.0230	0.0230		0.0216	0.0216	0.0000	55.5930	55.5930	0.0134	0.0000	55.9283
Total	**0.0456**	**0.4184**	**0.3978**	**6.5000e-004**		**0.0230**	**0.0230**		**0.0216**	**0.0216**	**0.0000**	**55.5930**	**55.5930**	**0.0134**	**0.0000**	**55.9283**

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	0.0223	0.8640	0.1665	2.5000e-003	0.0642	1.7900e-003	0.0660	0.0185	1.7100e-003	0.0202	0.0000	239.1017	239.1017	0.0169	0.0000	239.5230
Worker	0.1232	0.0862	0.9307	2.9900e-003	0.3364	1.9700e-003	0.3384	0.0893	1.8100e-003	0.0911	0.0000	270.5692	270.5692	6.1900e-003	0.0000	270.7239
Total	**0.1455**	**0.9502**	**1.0972**	**5.4900e-003**	**0.4006**	**3.7600e-003**	**0.4043**	**0.1078**	**3.5200e-003**	**0.1114**	**0.0000**	**509.6710**	**509.6710**	**0.0230**	**0.0000**	**510.2469**

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	0.0456	0.4184	0.3978	6.5000e-004		0.0230	0.0230		0.0216	0.0216	0.0000	55.5929	55.5929	0.0134	0.0000	55.9282
Total	**0.0456**	**0.4184**	**0.3978**	**6.5000e-004**		**0.0230**	**0.0230**		**0.0216**	**0.0216**	**0.0000**	**55.5929**	**55.5929**	**0.0134**	**0.0000**	**55.9282**

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	0.0223	0.8640	0.1665	2.5000e-003	0.0642	1.7900e-003	0.0660	0.0185	1.7100e-003	0.0202	0.0000	239.1017	239.1017	0.0169	0.0000	239.5230
Worker	0.1232	0.0862	0.9307	2.9900e-003	0.3364	1.9700e-003	0.3384	0.0893	1.8100e-003	0.0911	0.0000	270.5692	270.5692	6.1900e-003	0.0000	270.7239
Total	**0.1455**	**0.9502**	**1.0972**	**5.4900e-003**	**0.4006**	**3.7600e-003**	**0.4043**	**0.1078**	**3.5200e-003**	**0.1114**	**0.0000**	**509.6710**	**509.6710**	**0.0230**	**0.0000**	**510.2469**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1723	1.5772	1.6527	2.7200e-003		0.0817	0.0817		0.0769	0.0769	0.0000	234.0425	234.0425	0.0561	0.0000	235.4442
Total	**0.1723**	**1.5772**	**1.6527**	**2.7200e-003**		**0.0817**	**0.0817**		**0.0769**	**0.0769**	**0.0000**	**234.0425**	**234.0425**	**0.0561**	**0.0000**	**235.4442**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0877	3.4144	0.6528	0.0104	0.2701	6.3300e-003	0.2764	0.0779	6.0500e-003	0.0840	0.0000	997.5885	997.5885	0.0672	0.0000	999.2693
Worker	0.4862	0.3265	3.6106	0.0121	1.4157	8.0600e-003	1.4238	0.3759	7.4200e-003	0.3833	0.0000	1,097.0764	1,097.0764	0.0234	0.0000	1,097.6617
Total	**0.5740**	**3.7409**	**4.2634**	**0.0226**	**1.6858**	**0.0144**	**1.7002**	**0.4538**	**0.0135**	**0.4673**	**0.0000**	**2,094.6649**	**2,094.6649**	**0.0906**	**0.0000**	**2,096.9310**

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	0.1723	1.5772	1.6527	2.7200e-003		0.0817	0.0817		0.0769	0.0769	0.0000	234.0422	234.0422	0.0561	0.0000	235.4440
Total	**0.1723**	**1.5772**	**1.6527**	**2.7200e-003**		**0.0817**	**0.0817**		**0.0769**	**0.0769**	**0.0000**	**234.0422**	**234.0422**	**0.0561**	**0.0000**	**235.4440**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0877	3.4144	0.6528	0.0104	0.2701	6.3300e-003	0.2764	0.0779	6.0500e-003	0.0840	0.0000	997.5885	997.5885	0.0672	0.0000	999.2693
Worker	0.4862	0.3265	3.6106	0.0121	1.4157	8.0600e-003	1.4238	0.3759	7.4200e-003	0.3833	0.0000	1,097.0764	1,097.0764	0.0234	0.0000	1,097.6617
Total	**0.5740**	**3.7409**	**4.2634**	**0.0226**	**1.6858**	**0.0144**	**1.7002**	**0.4538**	**0.0135**	**0.4673**	**0.0000**	**2,094.6649**	**2,094.6649**	**0.0906**	**0.0000**	**2,096.9310**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0110**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0276**	**20.0276**	**6.4800e-003**	**0.0000**	**20.1895**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.6000e-004	5.1000e-004	5.6600e-003	2.0000e-005	2.2200e-003	1.0000e-005	2.2300e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7205	1.7205	4.0000e-005	0.0000	1.7214
Total	**7.6000e-004**	**5.1000e-004**	**5.6600e-003**	**2.0000e-005**	**2.2200e-003**	**1.0000e-005**	**2.2300e-003**	**5.9000e-004**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**1.7205**	**1.7205**	**4.0000e-005**	**0.0000**	**1.7214**

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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0110**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0275**	**20.0275**	**6.4800e-003**	**0.0000**	**20.1895**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.6000e-004	5.1000e-004	5.6600e-003	2.0000e-005	2.2200e-003	1.0000e-005	2.2300e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7205	1.7205	4.0000e-005	0.0000	1.7214
Total	**7.6000e-004**	**5.1000e-004**	**5.6600e-003**	**2.0000e-005**	**2.2200e-003**	**1.0000e-005**	**2.2300e-003**	**5.9000e-004**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**1.7205**	**1.7205**	**4.0000e-005**	**0.0000**	**1.7214**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4528					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.4548**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6100e-003	6.4500e-003	0.0714	2.4000e-004	0.0280	1.6000e-004	0.0281	7.4300e-003	1.5000e-004	7.5700e-003	0.0000	21.6784	21.6784	4.6000e-004	0.0000	21.6900
Total	**9.6100e-003**	**6.4500e-003**	**0.0714**	**2.4000e-004**	**0.0280**	**1.6000e-004**	**0.0281**	**7.4300e-003**	**1.5000e-004**	**7.5700e-003**	**0.0000**	**21.6784**	**21.6784**	**4.6000e-004**	**0.0000**	**21.6900**

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	0.4528					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.4548**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6100e-003	6.4500e-003	0.0714	2.4000e-004	0.0280	1.6000e-004	0.0281	7.4300e-003	1.5000e-004	7.5700e-003	0.0000	21.6784	21.6784	4.6000e-004	0.0000	21.6900
Total	**9.6100e-003**	**6.4500e-003**	**0.0714**	**2.4000e-004**	**0.0280**	**1.6000e-004**	**0.0281**	**7.4300e-003**	**1.5000e-004**	**7.5700e-003**	**0.0000**	**21.6784**	**21.6784**	**4.6000e-004**	**0.0000**	**21.6900**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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	18.50	10.10	7.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	18.50	10.10	7.90	0.00	0.00	0.00	0	0	0
Single Family Housing	19.80	9.60	12.90	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Other Non-Asphalt Surfaces	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	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	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.3350	1.1400e-003	0.0509	5.0000e-005		3.0400e-003	3.0400e-003		3.0400e-003	3.0400e-003	0.3187	0.6646	0.9832	1.0000e-003	2.0000e-005	1.0148
Unmitigated	0.3350	1.1400e-003	0.0509	5.0000e-005		3.0400e-003	3.0400e-003		3.0400e-003	3.0400e-003	0.3187	0.6646	0.9832	1.0000e-003	2.0000e-005	1.0148

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0453					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2789					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.8300e-003	7.8000e-004	0.0191	5.0000e-005		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.3187	0.6124	0.9310	9.5000e-004	2.0000e-005	0.9612
Landscaping	1.0200e-003	3.7000e-004	0.0318	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0522	0.0522	5.0000e-005	0.0000	0.0536
Total	**0.3350**	**1.1500e-003**	**0.0509**	**5.0000e-005**		**3.0300e-003**	**3.0300e-003**		**3.0300e-003**	**3.0300e-003**	**0.3187**	**0.6646**	**0.9832**	**1.0000e-003**	**2.0000e-005**	**1.0148**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0453					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2789					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.8300e-003	7.8000e-004	0.0191	5.0000e-005		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.3187	0.6124	0.9310	9.5000e-004	2.0000e-005	0.9612
Landscaping	1.0200e-003	3.7000e-004	0.0318	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0522	0.0522	5.0000e-005	0.0000	0.0536
Total	**0.3350**	**1.1500e-003**	**0.0509**	**5.0000e-005**		**3.0300e-003**	**3.0300e-003**		**3.0300e-003**	**3.0300e-003**	**0.3187**	**0.6646**	**0.9832**	**1.0000e-003**	**2.0000e-005**	**1.0148**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Paradise Valley Ranch AQ & GHG Analysis - Operational Emisson Analyis for full Project

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	16.78	1000sqft	0.39	16,777.00	0
Single Family Housing	8.00	Dwelling Unit	1.04	45,459.00	23
City Park	4.00	Acre	4.00	174,240.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - The project is proposing to use SoCal Edison/private solar for electricity.

Land Use - The project is proposed to construct and operate approximately 69.146 TSF of additional facility to the west coast "Center of Excellence". Since the proposed project is considered unique and CalEEMod does not have a specific land use type for this project, "Land Use-SFR", has been used as it closely relates to the proposed project's operation.

Construction Phase - No construction analysis has been analyzed in this CalEEMod run.

Vehicle Trips - Trip rates are based on Paradise Valley Ranch Project Traffic Assessment Scoping Agreement, January 2021, by RK Engneering Group.

Woodstoves - . Per SCAQMD rule 445, no wood burning devices are allowed in new developments; therefore, no wood hearths are included in this project.

Energy Use - Energy usage added to account for outdoor lighting, etc. 0.35 KHhr/SF/year

Paradise Valley Ranch AQ & GHG Analysis - Operational Emisson Analyis for full Project - Riverside-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	0.00	0.35
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	0.40	0.00
tblLandUse	LandUseSquareFeet	14,400.00	45,459.00
tblLandUse	LotAcreage	2.60	1.04
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	9.91	28.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	8.62	28.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	9.52	28.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0325	0.3150	0.2218	4.1000e-004	2.2200e-003	0.0155	0.0178	5.9000e-004	0.0144	0.0150	0.0000	35.7865	35.7865	9.6100e-003	0.0000	36.0268
Maximum	**0.0325**	**0.3150**	**0.2218**	**4.1000e-004**	**2.2200e-003**	**0.0155**	**0.0178**	**5.9000e-004**	**0.0144**	**0.0150**	**0.0000**	**35.7865**	**35.7865**	**9.6100e-003**	**0.0000**	**36.0268**

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	0.0325	0.3150	0.2218	4.1000e-004	2.2200e-003	0.0155	0.0178	5.9000e-004	0.0144	0.0150	0.0000	35.7864	35.7864	9.6100e-003	0.0000	36.0267
Maximum	**0.0325**	**0.3150**	**0.2218**	**4.1000e-004**	**2.2200e-003**	**0.0155**	**0.0178**	**5.9000e-004**	**0.0144**	**0.0150**	**0.0000**	**35.7864**	**35.7864**	**9.6100e-003**	**0.0000**	**36.0267**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2021	9-30-2021	0.3475	0.3475
		Highest	0.3475	0.3475

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	0.2793	2.3600e-003	0.0835	1.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7682	1.7682	1.6000e-004	3.0000e-005	1.7812
Energy	1.6300e-003	0.0141	7.2000e-003	9.0000e-005		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	108.7066	108.7066	4.1300e-003	1.0900e-003	109.1337
Mobile	0.0794	0.7086	1.2060	5.7600e-003	0.4682	4.0100e-003	0.4722	0.1254	3.7500e-003	0.1292	0.0000	533.2617	533.2617	0.0221	0.0000	533.8144
Waste						0.0000	0.0000		0.0000	0.0000	5.1519	0.0000	5.1519	0.3045	0.0000	12.7636
Water						0.0000	0.0000		0.0000	0.0000	1.1115	39.0403	40.1518	0.1158	3.0300e-003	43.9489
Total	**0.3603**	**0.7251**	**1.2967**	**5.8600e-003**	**0.4682**	**5.7100e-003**	**0.4739**	**0.1254**	**5.4500e-003**	**0.1309**	**6.2634**	**682.7768**	**689.0402**	**0.4467**	**4.1500e-003**	**701.4419**

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	0.2793	2.3600e-003	0.0835	1.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7682	1.7682	1.6000e-004	3.0000e-005	1.7812
Energy	1.6300e-003	0.0141	7.2000e-003	9.0000e-005		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	108.7066	108.7066	4.1300e-003	1.0900e-003	109.1337
Mobile	0.0794	0.7086	1.2060	5.7600e-003	0.4682	4.0100e-003	0.4722	0.1254	3.7500e-003	0.1292	0.0000	533.2617	533.2617	0.0221	0.0000	533.8144
Waste						0.0000	0.0000		0.0000	0.0000	5.1519	0.0000	5.1519	0.3045	0.0000	12.7636
Water						0.0000	0.0000		0.0000	0.0000	1.1115	39.0403	40.1518	0.1158	3.0300e-003	43.9489
Total	**0.3603**	**0.7251**	**1.2967**	**5.8600e-003**	**0.4682**	**5.7100e-003**	**0.4739**	**0.1254**	**5.4500e-003**	**0.1309**	**6.2634**	**682.7768**	**689.0402**	**0.4467**	**4.1500e-003**	**701.4419**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	9/28/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	5.7000e-004	6.1400e-003	2.0000e-005	2.2200e-003	1.0000e-005	2.2300e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7857	1.7857	4.0000e-005	0.0000	1.7867
Total	**8.1000e-004**	**5.7000e-004**	**6.1400e-003**	**2.0000e-005**	**2.2200e-003**	**1.0000e-005**	**2.2300e-003**	**5.9000e-004**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**1.7857**	**1.7857**	**4.0000e-005**	**0.0000**	**1.7867**

3.2 Demolition - 2021

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	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**		**0.0155**	**0.0155**		**0.0144**	**0.0144**	**0.0000**	**34.0007**	**34.0007**	**9.5700e-003**	**0.0000**	**34.2400**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	5.7000e-004	6.1400e-003	2.0000e-005	2.2200e-003	1.0000e-005	2.2300e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7857	1.7857	4.0000e-005	0.0000	1.7867
Total	**8.1000e-004**	**5.7000e-004**	**6.1400e-003**	**2.0000e-005**	**2.2200e-003**	**1.0000e-005**	**2.2300e-003**	**5.9000e-004**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**1.7857**	**1.7857**	**4.0000e-005**	**0.0000**	**1.7867**

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	0.0794	0.7086	1.2060	5.7600e-003	0.4682	4.0100e-003	0.4722	0.1254	3.7500e-003	0.1292	0.0000	533.2617	533.2617	0.0221	0.0000	533.8144
Unmitigated	0.0794	0.7086	1.2060	5.7600e-003	0.4682	4.0100e-003	0.4722	0.1254	3.7500e-003	0.1292	0.0000	533.2617	533.2617	0.0221	0.0000	533.8144

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Single Family Housing	224.00	224.00	224.00	1,226,318	1,226,318
Total	224.00	224.00	224.00	1,226,318	1,226,318

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
City Park	18.50	10.10	7.90	33.00	48.00	19.00	66	28	6
General Office Building	18.50	10.10	7.90	33.00	48.00	19.00	77	19	4
Single Family Housing	19.80	9.60	12.90	40.20	19.20	40.60	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
General Office Building	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Single Family Housing	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

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	92.5381	92.5381	3.8200e-003	7.9000e-004	92.8692
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	92.5381	92.5381	3.8200e-003	7.9000e-004	92.8692
NaturalGas Mitigated	1.6300e-003	0.0141	7.2000e-003	9.0000e-005		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	16.1685	16.1685	3.1000e-004	3.0000e-004	16.2645
NaturalGas Unmitigated	1.6300e-003	0.0141	7.2000e-003	9.0000e-005		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	16.1685	16.1685	3.1000e-004	3.0000e-004	16.2645

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					
City Park	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
General Office Building	58216.2	3.1000e-004	2.8500e-003	2.4000e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1066	3.1066	6.0000e-005	6.0000e-005	3.1251
Single Family Housing	244769	1.3200e-003	0.0113	4.8000e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0618	13.0618	2.5000e-004	2.4000e-004	13.1394
Total		**1.6300e-003**	**0.0141**	**7.2000e-003**	**9.0000e-005**		**1.1300e-003**	**1.1300e-003**		**1.1300e-003**	**1.1300e-003**	**0.0000**	**16.1685**	**16.1685**	**3.1000e-004**	**3.0000e-004**	**16.2645**

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					
City Park	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
General Office Building	58216.2	3.1000e-004	2.8500e-003	2.4000e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1066	3.1066	6.0000e-005	6.0000e-005	3.1251
Single Family Housing	244769	1.3200e-003	0.0113	4.8000e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0618	13.0618	2.5000e-004	2.4000e-004	13.1394
Total		**1.6300e-003**	**0.0141**	**7.2000e-003**	**9.0000e-005**		**1.1300e-003**	**1.1300e-003**		**1.1300e-003**	**1.1300e-003**	**0.0000**	**16.1685**	**16.1685**	**3.1000e-004**	**3.0000e-004**	**16.2645**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	60984	19.4308	8.0000e-004	1.7000e-004	19.5003
General Office Building	159717	50.8893	2.1000e-003	4.3000e-004	51.0713
Single Family Housing	69731.8	22.2181	9.2000e-004	1.9000e-004	22.2975
Total		**92.5381**	**3.8200e-003**	**7.9000e-004**	**92.8692**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	60984	19.4308	8.0000e-004	1.7000e-004	19.5003
General Office Building	159717	50.8893	2.1000e-003	4.3000e-004	51.0713
Single Family Housing	69731.8	22.2181	9.2000e-004	1.9000e-004	22.2975
Total		**92.5381**	**3.8200e-003**	**7.9000e-004**	**92.8692**

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	0.2793	2.3600e-003	0.0835	1.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7682	1.7682	1.6000e-004	3.0000e-005	1.7812
Unmitigated	0.2793	2.3600e-003	0.0835	1.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7682	1.7682	1.6000e-004	3.0000e-005	1.7812

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0252					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.7000e-004	1.4100e-003	6.0000e-004	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6329	1.6329	3.0000e-005	3.0000e-005	1.6426
Landscaping	2.5200e-003	9.5000e-004	0.0829	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1353	0.1353	1.3000e-004	0.0000	0.1386
Total	**0.2793**	**2.3600e-003**	**0.0835**	**1.0000e-005**		**5.7000e-004**	**5.7000e-004**		**5.7000e-004**	**5.7000e-004**	**0.0000**	**1.7682**	**1.7682**	**1.6000e-004**	**3.0000e-005**	**1.7812**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0252					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.7000e-004	1.4100e-003	6.0000e-004	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6329	1.6329	3.0000e-005	3.0000e-005	1.6426
Landscaping	2.5200e-003	9.5000e-004	0.0829	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1353	0.1353	1.3000e-004	0.0000	0.1386
Total	**0.2793**	**2.3600e-003**	**0.0835**	**1.0000e-005**		**5.7000e-004**	**5.7000e-004**		**5.7000e-004**	**5.7000e-004**	**0.0000**	**1.7682**	**1.7682**	**1.6000e-004**	**3.0000e-005**	**1.7812**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	40.1518	0.1158	3.0300e-003	43.9489
Unmitigated	40.1518	0.1158	3.0300e-003	43.9489

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 4.76593	16.8708	7.0000e-004	1.4000e-004	16.9312
General Office Building	2.98237 / 1.82791	19.7899	0.0980	2.4600e-003	22.9707
Single Family Housing	0.521232 / 0.328603	3.4911	0.0171	4.3000e-004	4.0471
Total		**40.1518**	**0.1158**	**3.0300e-003**	**43.9489**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 4.76593	16.8708	7.0000e-004	1.4000e-004	16.9312
General Office Building	2.98237 / 1.82791	19.7899	0.0980	2.4600e-003	22.9707
Single Family Housing	0.521232 / 0.328603	3.4911	0.0171	4.3000e-004	4.0471
Total		**40.1518**	**0.1158**	**3.0300e-003**	**43.9489**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.1519	0.3045	0.0000	12.7636
Unmitigated	5.1519	0.3045	0.0000	12.7636

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.34	0.0690	4.0800e-003	0.0000	0.1710
General Office Building	15.61	3.1687	0.1873	0.0000	7.8503
Single Family Housing	9.43	1.9142	0.1131	0.0000	4.7424
Total		**5.1519**	**0.3045**	**0.0000**	**12.7636**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.34	0.0690	4.0800e-003	0.0000	0.1710
General Office Building	15.61	3.1687	0.1873	0.0000	7.8503
Single Family Housing	9.43	1.9142	0.1131	0.0000	4.7424
Total		**5.1519**	**0.3045**	**0.0000**	**12.7636**

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