

Sycamore Hills Distribution Center Project

Draft Environmental Impact Report (DEIR)

Appendix F – Energy Analysis



Sycamore Hills Distribution Center

ENERGY ANALYSIS

CITY OF RIVERSIDE

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LIST OF ABBREVIATED TERMS

%	Percent
(1)	Reference
AQA	Air Quality Analysis for the Sycamore Hills Distribution Project
ARB	Air Resources Board
BACM	Best Available Control Measures
BTU	British Thermal Units
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
City	City of Riverside
CPEP	Clean Power and Electrification Pathway
CPUC	California Public Utilities Commission
DMV	Department of Motor Vehicles
EMFAC	Emissions Factor
EVs	Electric Vehicles
FERC	Federal Energy Regulatory Commission
GWh	Gigawatt Hour
HHDT	Heavy-Heavy-Duty Trucks
Hp-hr/gal	Horsepower-Hour Per Gallon
IEPR	Integrative Energy Policy Report
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
kBTU/yr	Kilo-British Thermal Units Per Year
kWh	Kilowatt Hours
kWh/yr	Kilowatt Hours Per Year
LDA	Light Duty Auto
LHDT1/LHDT2	Light-Heavy-Duty Trucks
MHDT	Medium-Heavy-Duty Trucks
mpg	Miles Per Gallon
MPO	Metropolitan Planning Organization
MW	Megawatt

PCL	Power Content Label
PG&E	Pacific Gas and Electric
Project	Sycamore Hills Distribution Center
RPU	Riverside Public Utilities
RTP	Regional Transportation Plan
SBUS	School Buses
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SDAB	San Diego Air Basin
SDG&E	San Diego Gas and Electric
SF	Square Feet
SoCalGas	Southern California Gas
TAC	Toxic Air Contaminants
TEA-21	Transportation Equity Act for the 21 st Century
TIA	Traffic Impact Analysis
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Sycamore Hills Distribution Center Energy Analysis* is summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for potential energy impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Energy Impact #1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	4.5	<i>Less Than Significant</i>	<i>n/a</i>
Energy Impact #2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	4.5	<i>Less Than Significant</i>	<i>n/a</i>
Energy Impact#3: Would the project conflict with the goals of: - Decreasing overall per capita energy consumption. - Decreasing reliance on fossil fuels such as coal, natural gas and oil. - Increasing reliance on renewable energy sources.	4.5	<i>Less Than Significant</i>	<i>n/a</i>

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1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed Sycamore Hills Distribution Center (Project). The purpose of this report is to ensure that energy implication is considered by the City of Riverside, as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the proposed Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

1.1 PROJECT DESCRIPTION

The proposed Project is to construct an industrial warehouse development on three parcels [Assessor Parcel Numbers (APNs) 263-060-022, 263-060-024, 263-060-026], totaling 48.64 gross acres. The property is located at the northeast corner of Barton Street and Alessandro Boulevard in the City of Riverside (City), immediately south of the Sycamore Canyon Wilderness Park, as shown on Exhibit 1-A. The property is spread in an east to west direction with natural rolling land descending gradually from a west to east direction. There are two jurisdictional drainages on the site. The undeveloped parcels are covered with a low to moderate growth of vegetation cover consisting of natural grasses and weeds with some granitic rock outcrops.

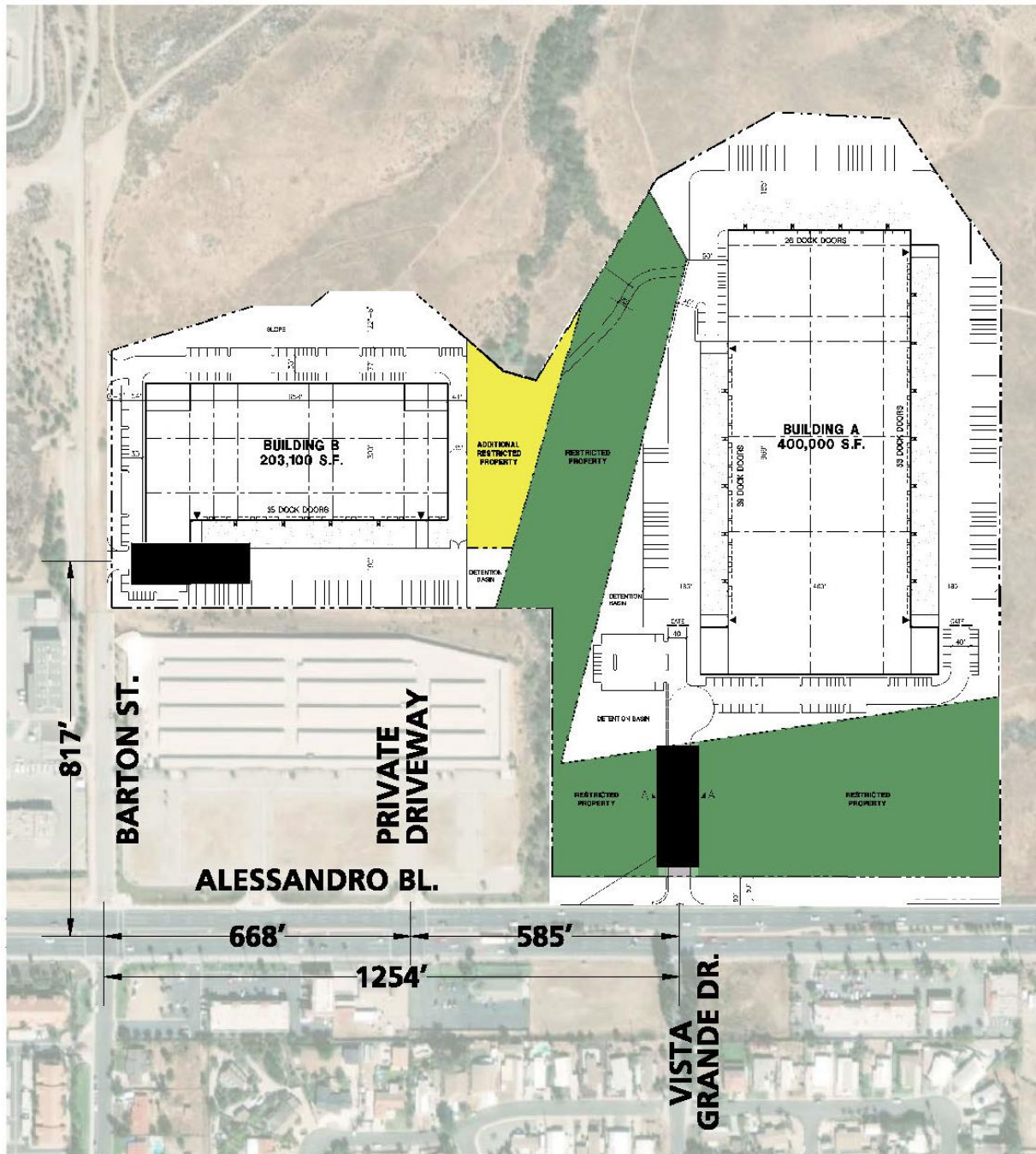
The Project proposes subdividing the site into two parcels (Parcels 1 and 2), and three lettered parcels (Parcels A, B, and C). Each parcel is proposed to be developed with a high cube transload short-term warehouse building (Buildings A and B). Building A, a 400,000 square foot warehouse, will be constructed on Parcel 1. Building B, a 203,100 square foot warehouse, will be constructed on Parcel 2. Associated improvements include parking, fire lanes, fencing and walls (including retaining walls), landscaping, and water quality treatment areas.

Parcels A and Parcel B consist of existing Restricted Property of natural land, with a supporting jurisdictional feature, totaling approximately 11.6 acres. A 0.67-acre driveway will be constructed through the Restricted Property to provide street access from Alessandro Boulevard to Parcel 1, which would reduce the Restricted Property to 10.93 acres. However, 1.44 acres will be added to Parcel A to mitigate this loss, resulting in a total of 12.37 acres of Restricted Property (net gain of 0.77 acres). A Conservation Easement is proposed to be placed over the amended 12.37 acres of Restricted Property.

A trailhead parking lot is proposed on Parcel C, totaling 1.18 acres, for access to the Sycamore Canyon Wilderness Park. Improvements include a parking lot, sidewalk, shade structure, bike rack, drinking fountain, fencing, and a Fire Department and access gate. Parcel C will be dedicated to the City.

At the time this energy study was prepared, the future tenants of the proposed Project were unknown. This energy study is intended to describe emission impacts associated with the expected typical 24-hour, seven days per week operational activities at the Project site.

EXHIBIT 1-A: PRELIMINARY SITE PLAN



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2 EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the Project area and region.

2.1 OVERVIEW

The most recent data for California's estimated total energy consumption is from 2017 and natural gas consumption is from 2018, released by the EIA's California State Profile and Energy Estimates in 2020 and included:

- Approximately 7,881 trillion British Thermal Unit (BTU) of energy was consumed; (2);
- Approximately 2,137 billion cubic feet of natural gas (2)

The California Energy Commission's (CEC) Transportation Energy Demand Forecast 2018-2030 was released in order to support the 2017 Integrated Energy Policy Report. The Transportation energy Demand Forecast 2018-2030 lays out graphs and data supporting their projections of California's future transportation energy demand. The projected inputs consider expected variable changes in fuel prices, income, population, and other variables. Predictions regarding fuel demand included:

- Gasoline demand in the transportation sector is expected to decline from approximately 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030 (3)
- Diesel demand in the transportation sector is expected to rise, increasing from approximately 3.7 billion diesel gallons in 2015 to approximately 4.7 billion in 2030 (3)
 - Data from the Department of Energy states that approximately 3.9 billion gallons of diesel fuel were consumed in 2017 (4)

The most recent data provided by the United States Energy Information Administration (EIA) for energy use in California by demand sector is from 2017 and is reported as follows:

- Approximately 40.3 percent (%) transportation;
- Approximately 23.1% industrial;
- Approximately 18.0% residential; and
- Approximately 18.7% commercial (5)

In 2018, total system electric generation for California was 285,488 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 194,842 GWh which accounted for approximately 68% of the electricity it uses; the rest was imported from the Pacific Northwest (14%) and the U.S. Southwest (18%) (6). Natural gas is the main source for electricity generation at 47% of the total in-state electric generation system power as shown in Table 2-1.

TABLE 2-1: TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2018)

Fuel Type	California In-State Generation	Percent of California In-State	Northwest Imports (GWh)	Southwest Imports (GWh)	California Power Mix (GWh)	Percent California Power Mix
Coal	294	0.15%	399	8,740	9,433	3.30%
Large Hydro	22,096	11.34%	7,418	985	30,499	10.68%
Natural Gas	90,691	46.54%	49	8,904	99,644	34.91%
Nuclear	18,268	9.38%	0	7,573	25,841	9.05%
Oil	35	0.02%	0	0	35	0.01%
Other	430	0.22%	0	9	439	0.15%
Renewables	63,028	32.35%	14,074	12,400	89,502	31.36%
Biomass	5,909	3.03%	772	26	6,707	2.35%
Geothermal	11,528	5.92%	171	1,269	12,968	4.54%
Small Hydro	4,248	2.18%	334	1	4,583	1.61%
Solar	27,265	13.99%	174	5,094	32,533	11.40%
Wind	14,078	7.23%	12,623	6,010	32,711	11.46%
Unspecified Sources of Power	N/A	N/A	17,576	12,519	30,095	10.54%
Total	194,842	100%	39,517	51,130	285,488	100%

Source: https://www.energy.ca.gov/almanac/electricity_data/total_system_power.html

An updated summary of, and context for energy consumption and energy demands within the State is presented in “U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts” excerpted below:

- California was the seventh-largest producer of crude oil among the 50 states in 2018, and, as of January 2019, it ranked third in oil refining capacity.
- California is the largest consumer of jet fuel among the 50 states and accounted for one-fifth of the nation’s jet fuel consumption in 2018. (7)
- California's total energy consumption is second-highest in the nation, but, in 2018, the state's per capita energy consumption was the fourth-lowest, due in part to its mild climate and its energy efficiency programs. (8)
- In 2018, California ranked first in the nation as a producer of electricity from solar, geothermal, and biomass resources and fourth in the nation in conventional hydroelectric power generation.
- In 2018, large- and small-scale solar PV and solar thermal installations provided 19% of California’s net electricity generation (9).

As indicated above, California is one of the nation's leading energy-producing states, and California per capita energy use is among the nation's most efficient. Given the nature of the proposed Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Project.

2.2 ELECTRICITY

The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California ISO studies had revealed the extent to which the South California Air Basin (SCAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts (10). If the resource development outlined in the preliminary plan continues as detailed, reliability in Southern California would likely be assured; however, tight resource margins have led energy agencies and the California Air Resources Board (CARB) to develop a contingency plan. This contingency plan was discussed at a public workshop in Los Angeles on August 20, 2014 and is detailed within this Section (11).

Electricity is provided to the Project by Riverside Public Utilities (RPU). RPU provides electric power to more than 109,000 metered electric customers throughout Riverside. Based on the Power Content Label (PCL), RPU derives electricity from varied energy resources including: geothermal, solar, wind, coal-fired, hydro-powered, and nuclear resources. Internal generation is provided by the Riverside Energy Resource Center power plant which provides 192 megawatt (MW) gas-fired power used to offset power shortages (12).

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California Independent Service Operator (ISO) is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities (such as RPU) still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that sufficient power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities (13).

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, transmission owners file annual

transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Table 2-2 identifies RPU's specific proportional shares of electricity sources in 2018. As indicated in Table 2-2, the 2018 RPU Power Mix has renewable energy at 34% of the overall energy resources (14).

TABLE 2-2: RPU 2018 POWER CONTENT MIX

Energy Resources	2018 RPU Power Mix
Eligible Renewable	34%
Biomass & waste	0%
Geothermal	18%
Eligible Hydroelectric	0%
Solar	12%
Wind	4%
Coal	29%
Large Hydroelectric	1%
Natural Gas	4%
Nuclear	4%
Other	0%
Unspecified Sources of power*	27%
Total	100%

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

2.3 NATURAL GAS

The usage associated with natural gas use were calculated using the CalEEMod version 2016.3.2 model. The following summary of natural gas resources and service providers, delivery systems, and associated regulation is excerpted from information provided by the California Public Utilities Commission (CPUC).

"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.

The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers, who accounted for approximately 32% of the natural gas delivered by California utilities in 2012. Large consumers, like electric generators and industrial customers, referred to as "noncore" customers, accounted for approximately 68% of the natural gas delivered by California utilities in 2012.

The PUC regulates the California utilities' natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California. California gas utilities may soon also begin receiving biogas into their pipeline systems.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California consumers are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Questar Southern Trails and Mojave Pipeline. Another pipeline, the North Baja – Baja Norte Pipeline, takes gas off the El Paso Pipeline at the California/Arizona border, and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, the PUC often participates in FERC regulatory proceedings to represent the interests of California natural gas consumers.

Most of the natural gas transported via the interstate pipelines, as well as some of the California-produced natural gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered into the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline systems, while core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. The PUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82% of the total amount of natural gas delivered to California's gas consumers in 2012.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, and currently receive all of their natural gas from the SoCalGas system (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area). Some other municipal wholesale customers are the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Some of the natural gas delivered to California customers may be delivered directly to them without being transported over the regulated utility systems. For example, the Kern

River/Mojave pipeline system can deliver natural gas directly to some large customers, “bypassing” the utilities’ systems. Much of California-produced natural gas is also delivered directly to large consumers.

PG&E and SoCalGas own and operate several natural gas storage fields that are located in northern and southern California. These storage fields, and four independently owned storage utilities – Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage – help meet peak seasonal natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. (A portion of the Gill Ranch facility is owned by PG&E).

California’s regulated utilities do not own any natural gas production facilities. All of the natural gas sold by these utilities must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the FERC in the mid-1980’s and is determined by “market forces.” However, the PUC decides whether California’s utilities have taken reasonable steps in order to minimize the cost of natural gas purchased on behalf of their core customers.” (15)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The PUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. In March 2018, the Department of Motor Vehicles (DMV) identified 35 million registered vehicles in California (16), and those vehicles (as noted previously) consume an estimated 19 billion gallons of fuel each year¹. Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

California’s on-road transportation system includes 170,000 miles of highways and major roadways, more than 27 million passenger vehicles and light trucks, and almost 8 million medium- and heavy-duty vehicles (16). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. Petroleum comprises about 92% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels (17). Nearly 19 billion gallons of on-highway fuel are burned each year, including 15.1 billion gallons of gasoline (including ethanol) and 3.9 billion gallons of diesel fuel (including biodiesel and renewable diesel). In 2016, Californians also used 194 million therms of natural gas as a transportation fuel (18), or the equivalent of 155 million gallons of gasoline.

¹ Fuel consumptions estimated utilizing information from EMFAC2017.

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3 REGULATORY BACKGROUND

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and the CEC are two agencies with authority over different aspects of energy.

3.1 FEDERAL REGULATIONS

INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 (ISTEA)

The ISTEA promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

THE TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY (TEA-21)

TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

3.2 CALIFORNIA REGULATIONS

INTEGRATED ENERGY POLICY REPORT

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code § 25301a). The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2018 IEPR was adopted February 20, 2019, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2018 IEPR focuses

on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast (19).

STATE OF CALIFORNIA ENERGY PLAN

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 version of Title 24 was adopted by the CEC and went into effect on January 1, 2020 and is applicable to building permit applications submitted on or after that date. The 2019 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, update indoor and outdoor lighting for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7% less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will use about 53% less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30% less energy due to lighting upgrades (20).

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4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

4.1 EVALUATION CRITERIA

In compliance with Appendix G of the *State CEQA Guidelines* (1), this report analyzes the project's anticipated energy use to determine if the Project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

In addition, Appendix F of the *State CEQA Guidelines* (21), states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas and oil; and
- Increasing reliance on renewable energy sources.

4.2 METHODOLOGY

Information from the CalEEMod 2016.3.2 outputs for the *Air Quality Analysis for the Sycamore Hills Distribution Project* (RECON Environmental, Inc.) (AQA) was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands (22).

4.2.1 EMISSION FACTORS MODEL

On August 19, 2019, the EPA approved the 2017 version of the EMISSIONS FACTOR model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2017 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (23). This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2017 emission inventory in order to derive the average vehicle fuel economy which is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. For purposes of analysis, 2021 and 2022 analysis years were utilized to determine the average vehicle fuel economy used during construction activities and a 2023 analysis year was used for operational activities.

4.3 CONSTRUCTION ENERGY DEMANDS

4.3.1 CONSTRUCTION EQUIPMENT ELECTRICITY USAGE ESTIMATES

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project.

Based on the 2017 *National Construction Estimator*, Richard Pray (2017) (24), the typical power cost per 1,000 sf of construction per month is estimated to be \$2.32. For the Sycamore Hills Distribution Center development, the Project plans to include the development of 603,100 square feet (sf) of High-Cube Transload Short-Term Warehouse use between two buildings. The Project is anticipated to be developed within a 15-month period. Based on Table 4-1, the total power cost of the on-site electricity usage during the construction of the proposed Project is estimated to be approximately \$20,987.88. Additionally, as of January 1, 2020, RPU's service rate schedule for large general and industrial land uses is \$0.09 per kilowatt hours (kWh) of electricity (25)². As shown on Table 4-2, the total electricity usage from on-site Project construction related activities is estimated to be approximately 222,251 kWh.

TABLE 4-1: PROJECT CONSTRUCTION POWER COST

Land Use	Power Cost (per 1,000 sf construction per month)	Total Size (1,000 sf)	Construction Duration (months)	Project Construction Power Cost
High-Cube Transload Short-Term Warehouse	\$2.32	603.100	15	\$20,987.88
TOTAL PROJECT CONSTRUCTION COST				\$20,987.88

TABLE 4-2: PROJECT CONSTRUCTION ELECTRICITY USAGE

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
High-Cube Transload Short-Term Warehouse	\$0.09	222,251
TOTAL PROJECT CONSTRUCTION ELECTRICITY USAGE (kWh)		222,251

²Assumes the Project will be under the large general and industrial land use service rates under RPU

4.3.2 CONSTRUCTION EQUIPMENT FUEL ESTIMATES

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction. Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4-3. Eight-hour daily use of all equipment is assumed. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower-hour per gallon (hp-hr/gal), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines (26). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is standard practice consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the City and region.

² It should be noted that the rate used in their analysis is based on the average demand charge for the 2022 construction year consistent with the AQA. RPU presents billing demand charges for on-peak, mid-peak, and off-peak periods.

TABLE 4-3: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Activity/Duration	Equipment	Horsepower Rating	Quantity	Usage Hours	Load Factor	hp-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Site Preparation (18 days)	Rubber Tired Dozers	247	3	8	0.40	2,371	2,307
	Tractors/Loaders/Backhoes	97	4	8	0.37	1,148	1,117
Grading (47 days)	Excavators	158	2	8	0.38	961	2,441
	Graders	187	1	8	0.41	613	1,558
	Rubber Tired Dozers	247	1	8	0.40	790	2,008
	Scrapers	367	2	8	0.48	2,819	7,161
	Tractors/Loaders/Backhoes	97	2	8	0.37	574	1,459
Building Construction (243 days)	Cranes	231	1	7	0.29	469	6,159
	Forklifts	89	3	8	0.20	427	5,611
	Generator Sets	84	1	8	0.74	497	6,532
	Tractors/Loaders/Backhoes	97	3	7	0.37	754	9,900
	Welders	46	1	8	0.45	166	2,175
Paving (18 days)	Pavers	130	2	8	0.42	874	850
	Paving Equipment	132	2	8	0.36	760	740
	Rollers	80	2	8	0.38	486	473
Architectural Coating (111 days)	Air Compressors	78	1	6	0.48	225	1,348
CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)							51,839

As presented in Table 4-3, Project construction activities would consume an estimated 51,839 gallons of diesel fuel during construction. Project construction would represent a “single-event” diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

4.3.3 CONSTRUCTION WORKER FUEL ESTIMATES

It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated VMT, the construction worker trips would generate an estimated 1,135,149 VMT (22). Data regarding Project related construction worker trips were based on information provided in the AQA. Output from the model runs for construction activity were obtained from the AQA and are provided in Appendix 3.1.

As previously stated, vehicle fuel efficiencies for LDAs were estimated using information generated within the 2017 version of the EMFAC developed by the CARB. EMFAC2017 was run for the LDA vehicle class within the California sub-area for the 2021 and 2022 construction years. Data from EMFAC2017 is shown in Appendix 3.2.

As generated by EMFAC2017, the aggregated fuel economy of LDAs ranging from model year 1974 to model years 2021 and 2022 are presented in Table 4-4. Table 4-4 provides an estimated annual fuel consumption resulting from the Project generated by LDAs related to construction worker trips. As shown in Table 4-4, approximately 36,442 gallons of fuel would be consumed in relation to construction worker trips during construction of the Project. Project construction worker trips would represent a “single-event” gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

TABLE 4-4: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES

Construction Activity	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2021					
Site Preparation (18 days)	18	14.7	4,763	30.64	155
Grading (47 days)	20	14.7	13,818	30.64	451
Building Construction (132 days)	253	14.7	490,921	30.64	16,020
2022					
Building Construction (111 days)	253	14.7	412,820	31.57	13,075
Paving (18 days)	15	14.7	3,969	31.57	126
Architectural Coating (111 days)	128	14.7	208,858	31.57	6,615
CONSTRUCTION WORKER FUEL CONSUMPTION					36,442

4.3.4 CONSTRUCTION VENDOR FUEL ESTIMATES

With respect to estimated VMT, the construction vendor trips would generate an estimated 167,670 VMT along area roadways (22). It is assumed that 50% of all vendor trips are from Medium-Heavy-Duty-Trucks (MHDT) and 50% of vendor trips are from Heavy-Heavy-Duty Trucks (HHDT). Vehicle fuel efficiencies for MHDTs and HHDTs were estimated using information generated within EMFAC2017. For purposes of this analysis, EMFAC2017 was run for the MHDT and HHDT vehicle class within the California sub-area for the 2021 and 2022 construction years.

As generated by EMFAC2017, the aggregated fuel economy of MHDTs and HHDTs ranging from model year 1974 to model years 2021 and 2022 are presented in Table 4-5. Based on Table 4-5, it is estimated that 9,280 gallons of fuel would be consumed in relation to construction vendor trips (MHDTs). Table 4-6 shows the estimated fuel economy of HHDTs accessing the Project site. Based on Table 4-6, fuel consumption from construction vendor trips (HHDTs) will total approximately 13,143 gallons during construction of the Project. The total fuel consumption from construction vendor trips (MHDTs and HHDTs) is 22,423 gallons. Project construction vendor trips would represent a “single-event” diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

TABLE 4-5: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES – MHDT

Construction Activity	Vendor Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor					
2021					
Building Construction (132 days)	50	6.9	45,540	8.88	5,127
2022					
Building Construction (111 days)	50	6.9	38,295	9.22	4,153
TOTAL FUEL CONSUMPTION – VENDOR (MHDT)					9,280

TABLE 4-6: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES – HHDT (1 OF 2)

Construction Activity	Vendor Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor					
2021					
Building Construction (132 days)	50	6.9	45,540	6.30	7,224

TABLE 4-6: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES – HHDT (2 OF 2)

Construction Activity	Vendor Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor					
2022					
Building Construction (111 days)	50	6.9	38,295	6.47	5,920
TOTAL FUEL CONSUMPTION – VENDOR (HHDT)					13,143

4.3.5 CONSTRUCTION ENERGY EFFICIENCY/CONSERVATION MEASURES

The equipment used for Project construction would conform to CARB regulations and California emissions standards. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

The Project would utilize construction contractors which practice compliance with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants (TAC). Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additionally, certain incidental construction-source energy efficiencies would likely accrue through implementation of California regulations and best available control measures (BACM). More specifically, CCR Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. To this end, “grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling.” In this manner, construction equipment operators are informed that engines are to be turned off at or prior to five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Indirectly, construction energy efficiencies and energy conservation would be achieved for the proposed development through energy efficiencies realized from bulk purchase, transport and use of construction materials.

A full analysis related to the energy needed to form construction materials is not included in this analysis due to a lack of detailed Project-specific information on construction materials. At this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared.

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

4.4 OPERATIONAL ENERGY DEMANDS

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

4.4.1 TRANSPORTATION ENERGY DEMANDS

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. For purposes of this analysis, EMFAC2017 was run for LDA, Light-Heavy-Duty Trucks (LHDT1 and LHDT2), MHDT, and HHDT vehicle classes within the California sub-area for the 2023 operational year.

LIGHT-DUTY AUTOS

With respect to estimated VMT, the Project would generate an estimated 4,706,914 annual VMT along area roadways for all LDAs with full build-out of the Project (22). Table 4-7 provides an estimated range of annual fuel consumption resulting from Project generated LDAs. Based on Table 4-7, it is estimated that 144,438 gallons of fuel will be consumed from Project generated LDA trips.

TABLE 4-7: PROJECT-GENERATED LDA VEHICLE TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
4,706,914	32.59	144,438

LIGHT-HEAVY DUTY TRUCKS

With respect to estimated VMT, and based on the trip frequency and trip length methodologies cited in the Project's AQA, the Project would generate an estimated 641,896 annual VMT along area roadways for all Light-Heavy-Duty Trucks (LHDT1)³ vehicles with full build-out of the Project

³ Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

(22). Table 4-8 provides an estimated range of annual fuel consumption resulting from Project generated LHDT1s. Based on Table 4-8, it is estimated that 46,497 gallons of fuel will be consumed from Project generated LHDT1 trips.

TABLE 4-8: PROJECT-GENERATED LHDT1 TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
641,896	13.81	46,497

Additionally, the Project would generate an estimated 795,202 annual VMT along area roadways for all LHDT2⁴ vehicles with full build-out of the Project (22). Table 4-9 provides an estimated range of annual fuel consumption resulting from Project generated LHDT2s. Based on Table 4-9, it is estimated that 56,075 gallons of fuel will be consumed from Project generated LHDT2 trips.

TABLE 4-9: PROJECT-GENERATED LHDT2 TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
795,202	14.18	56,075

MEDIUM-HEAVY DUTY TRUCKS

With respect to estimated VMT, and based on the trip frequency and trip length methodologies cited in the Project's AQA, the Project would generate an estimated 973,358 annual VMT along area roadways for all MHDTs with full build-out of the Project (22). Table 4-10 provides an estimated range of annual fuel consumption resulting from Project generated MHDTs. Based on Table 4-10, it is estimated that 101,532 gallons of fuel will be consumed from Project generated MHDT trips.

TABLE 4-10: PROJECT-GENERATED MHDT TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
973,358	9.59	101,532

HEAVY-HEAVY DUTY TRUCKS

With respect to estimated VMT, and based on the trip frequency and trip length methodologies cited in the Project's AQA, the Project would generate an estimated 1,412,631 annual VMT along area roadways for all HHDTs with full build-out of the Project (22). Table 4-11 provides an estimated range of annual fuel consumption resulting from Project generated HHDTs. Based on Table 4-11, it is estimated that 206,523 gallons of fuel will be consumed from Project generated HHDT trips.

⁴ Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

TABLE 4-11: PROJECT-GENERATED HHDT TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
1,412,631	6.84	206,523

As summarized on Table 4-12, the Project will result in 8,530,001 annual VMT and an estimated annual fuel consumption of 555,065 gallons of fuel.

TABLE 4-12: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION (ALL VEHICLES)

Vehicle Type	Annual VMT	Estimated Annual Fuel Consumption (gallons)
LDA	4,706,914	144,438
LHDT1	641,896	46,497
LHDT2	795,202	56,075
MHDT	973,358	101,532
HHDT	1,412,631	206,523
TOTAL (ALL VEHICLES)	8,530,001	555,065

4.4.2 FACILITY ENERGY DEMANDS

Project building operations and Project site maintenance activities would result in the consumption of natural gas and electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied to the Project by RPU. Annual natural gas and electricity demands of the Project are summarized in Tables 4-13 and 4-14.

TABLE 4-13: PROJECT ANNUAL OPERATIONAL NATURAL GAS DEMAND SUMMARY

Natural Gas Demand	kBTU/yr
High-Cube Transload Short-Term Warehouse	1,224,290
TOTAL PROJECT NATURAL GAS DEMAND	1,224,290

kBTU/yr = kilo-British thermal units per year

TABLE 4-14: PROJECT ANNUAL OPERATIONAL ELECTRICITY DEMAND SUMMARY

Electricity Demand	kWh/yr
Parking Lot	76,230
High-Cube Transload Short-Term Warehouse	1,423,320
TOTAL PROJECT ELECTRICITY DEMAND	1,499,550

kWh/yr = kilowatt hours per year

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as in plug-in

appliances. In California, CALGreen; CCR, Title 24, Part 11, governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting (27). Non-building energy use, or “plug-in” energy use can be further subdivided by specific end-use (refrigeration, cooking, appliances, etc.).

4.4.3 OPERATIONAL ENERGY EFFICIENCY/CONSERVATION MEASURES

Energy efficient/energy conserving design features and operational programs that would be implemented under the Project are summarized below. Also noted in the following discussions, energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title 24, California Green Building Standards Code). The Project incorporates a series of measures that generally reduce energy demand associated with the Project. As previously stated, the Project will comply with the 2019 Title 24 Standards.

The Project would also not result in a substantial increase in demand for transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure (other than site-adjacent and on-site connects to local utilities).

Enhanced Vehicle Fuel Efficiencies

Project annual fuel consumption estimates presented previously in Tables 4-12 and represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

The amount of fuel consumed by the Project can be expected to decrease as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

4.5 SUMMARY

4.5.1 CONSTRUCTION ENERGY DEMANDS

The estimated power cost of on-site electricity usage during the construction of the proposed Project is assumed to be around \$20,987.88. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be around 222,251 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 51,839 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project’s proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Best available control measures inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the proposed Project would result in the estimated fuel consumption of 36,442 gallons of fuel. Additionally, fuel consumption from construction vendor trips (MHDTs and HHDTs) will total approximately 22,423 gallons. Diesel fuel would be supplied by City and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved through the use of bulk purchases, transport and use of construction materials. The 2018 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements (19). As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

4.5.2 OPERATIONAL ENERGY DEMANDS

TRANSPORTATION ENERGY DEMANDS

Annual vehicular trips and related VMT generated by the operation of the Project would result in an estimated 144,438 gallons of fuel consumption per year for LDAs, 46,497 gallons of fuel consumption per year for LHDT1s, 56,075 gallons of fuel consumption per year for LHDT2s, an estimated 101,532 gallons of fuel consumption per year for MHDTs, and 206,523 gallons of fuel consumption per year for HHDTs. The total estimated annual fuel consumption from Project generated VMT would result in a fuel demand 555,065 gallons of fuel.

Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with industrial uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Ed., 2017); and CalEEMod. That is, the Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. The Project would implement sidewalks, facilitating and encouraging pedestrian access. Facilitating pedestrian and bicycle access would reduce VMT and associated energy consumption. In compliance with the California Green Building Standards Code, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations.

As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

FACILITY ENERGY DEMANDS

Project facility operational energy demands are estimated at: 1,224,290 kBTU/yr of natural gas; and 1,499,550 kWh/yr of electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied by RPU. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project energy demands in total would be comparable to, or less than, other industrial projects of similar scale and configuration.

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5 CONCLUSIONS

5.1.1 ENERGY IMPACT 1

Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

As supported by the preceding analyses, Project operations would not result in the inefficient, wasteful or unnecessary consumption of energy. Further, the energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

5.1.2 ENERGY IMPACT 2

Energy Impact-Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

CONSISTENCY WITH ISTEA

Transportation and access to the Project site is provided primarily by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because Southern California Association of Governments (SCAG) is not planning for intermodal facilities on or through the Project site.

CONSISTENCY WITH TEA-21

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21.

CONSISTENCY WITH IEPR

Electricity would be provided to the Project by RPU and natural gas is provided by SoCalGas. RPU's Strategic Plan: 2017-2021 and SoCalGas 2018 Corporate Sustainability Report builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation the goals presented in the 2018 IEPR.

Additionally, the Project will comply with the applicable Title 24 standards which would ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary. As such, development of the proposed Project would support the goals presented in the 2019 IEPR.

CONSISTENCY WITH STATE OF CALIFORNIA ENERGY PLAN

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access takes advantage of existing infrastructure systems, and promotes land use compatibilities through the introduction of industrial uses on a business/office park-designated site. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.

CONSISTENCY WITH CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

The 2019 version of Title 24 was adopted by the CEC and became effective on January 1, 2020. The analysis herein assumes compliance with the 2019 Title 24 Standards.

5.1.3 ENERGY IMPACT 3

- ***Decreasing overall per capita energy consumption.***
- ***Decreasing reliance on fossil fuels such as coal, natural gas and oil.***
- ***Increasing reliance on renewable energy sources.***

As previously stated, energy efficient/energy conserving design features and operational programs that would be implemented under the Project are summarized below. Also noted in the following discussions, energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title24, California Green Building Standards Code). The Project incorporates a series of measures that generally reduce energy demand associated with the Project. As previously stated, the Project will comply with the 2019 Title 24 Standards.

The Project would also not result in a substantial increase in demand for transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure (other than site-adjacent and on-site connects to local utilities).

Additionally, the Project annual fuel consumption estimates analyzed herein represents the likely potential maximums that would occur for the proposed Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

The amount of fuel consumed by the Project can be expected to decrease as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

On this basis, the Project would decrease overall per capital energy consumption, reliance on fossil fuels such as coal, natural gas, and oil, and increases reliance on renewable energy sources.

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7 CERTIFICATIONS

The contents of this energy report represent an accurate depiction of the environmental impacts associated with the proposed Sycamore Hills Distribution Center Project. The information contained in this energy report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June 2013
Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 3.1:

CALEEMOD MODEL OUTPUTS

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Annual

9309 Sycamore Hills Distribution Center - Passenger Cars
South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	603.10	1000sqft	37.00	603,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MW/hr)	1051.61	CH4 Intensity (lb/MW/hr)	0.023	N2O Intensity (lb/MW/hr)	0.005

1.3 User Entered Comments & Non-Default Data

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Annual

Project Characteristics - RPS - 33% goal by 2020, 18.4% accounted for in CalEEMod

Land Use - 37 acre site

603,100 sf

Construction Phase - 6 weeks - grading

2 months - slab, walls, concrete

1 month - roof

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - 847 ADT

Passenger cars - 573 (0.95 trips/ksf)

24.2 mile trip length

Energy Use -

Water And Wastewater - CalGreen requires 20% reduction in indoor water use (111,573,500 gallons)

Construction Off-road Equipment Mitigation - 61% reduction

Waste Mitigation -

Fleet Mix - Passenger cars only

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	55	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	55	61
tblConstructionPhase	NumDays	740.00	178.00
tblConstructionPhase	NumDays	75.00	30.00
tblConstructionPhase	NumDays	55.00	22.00
tblConstructionPhase	PhaseEndDate	3/28/2025	11/30/2022
tblConstructionPhase	PhaseEndDate	5/27/2022	3/25/2022
tblConstructionPhase	PhaseEndDate	6/13/2025	12/30/2022
tblConstructionPhase	PhaseStartDate	5/28/2022	3/28/2022

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Annual

tblConstructionPhase	PhaseStartDate	3/29/2025	12/1/2022
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	1.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.8470e-003	0.00
tblFleetMix	MCY	4.8220e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.6900e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.1100e-003	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	UBUS	1.7690e-003	0.00
tblGrading	AcresOfGrading	75.00	187.50
tblLandUse	LotAcreage	13.85	37.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	1325.65	1051.61
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	CC_TL	8.40	24.20
tblVehicleTrips	CNW_TL	6.90	24.20
tblVehicleTrips	CW_TL	16.60	24.20
tblVehicleTrips	ST_TR	1.68	0.95
tblVehicleTrips	SU_TR	1.68	0.95
tblVehicleTrips	WD_TR	1.68	0.95
tblWater	IndoorWaterUseRate	139,466,875.00	111,573,500.00

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Annual

2.0 Emissions Summary**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
Year	tons/yr										MT/yr					
2022	0.3804	3.4691	3.3022	8.7000e-003	0.7714	0.1304	0.9017	0.2931	0.1215	0.4146	0.0000	786.7471	786.7471	0.1179	0.0000	789.6954
Maximum	0.3804	3.4691	3.3022	8.7000e-003	0.7714	0.1304	0.9017	0.2931	0.1215	0.4146	0.0000	786.7471	786.7471	0.1179	0.0000	789.6954

Mitigated Construction

	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
Year	tons/yr										MT/yr					
2022	0.3804	3.4691	3.3022	8.7000e-003	0.4903	0.1304	0.6207	0.1654	0.1215	0.2869	0.0000	786.7467	786.7467	0.1179	0.0000	789.6950
Maximum	0.3804	3.4691	3.3022	8.7000e-003	0.4903	0.1304	0.6207	0.1654	0.1215	0.2869	0.0000	786.7467	786.7467	0.1179	0.0000	789.6950

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	36.44	0.00	31.17	43.57	0.00	30.80	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)					Maximum Mitigated ROG + NOX (tons/quarter)				
1	1-3-2022	4-2-2022	1.2195					1.2195				
2	4-3-2022	7-2-2022	0.9167					0.9167				
3	7-3-2022	9-30-2022	0.9066					0.9066				
		Highest	1.2195					1.2195				

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.4596	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160
Energy	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	744.2579	744.2579	0.0161	4.4300e-003	745.9793
Mobile	0.1150	0.2458	3.1992	0.0133	1.7549	0.0107	1.7656	0.4659	9.8300e-003	0.4757	0.0000	1,203.5080	1,203.5080	0.0211	0.0000	1,204.0349
Waste						0.0000	0.0000		0.0000	0.0000	115.0776	0.0000	115.0776	6.8009	0.0000	285.0999
Water						0.0000	0.0000		0.0000	0.0000	35.3971	692.9882	728.3853	3.6508	0.0891	846.2185
Total	2.5811	0.3059	3.2573	0.0137	1.7549	0.0153	1.7702	0.4659	0.0144	0.4803	150.4747	2,640.7691	2,791.2438	10.4889	0.0936	3,081.3486

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Annual

2.2 Overall Operational**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Area	2.4596	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160
Energy	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	744.2579	744.2579	0.0161	4.4300e-003	745.9793
Mobile	0.1150	0.2458	3.1992	0.0133	1.7549	0.0107	1.7656	0.4659	9.8300e-003	0.4757	0.0000	1,203.5080	1,203.5080	0.0211	0.0000	1,204.0349
Waste						0.0000	0.0000		0.0000	0.0000	86.3082	0.0000	86.3082	5.1007	0.0000	213.8249
Water						0.0000	0.0000		0.0000	0.0000	35.3971	692.9882	728.3853	3.6508	0.0891	846.2185
Total	2.5811	0.3059	3.2573	0.0137	1.7549	0.0153	1.7702	0.4659	0.0144	0.4803	121.7053	2,640.7691	2,762.4744	8.7887	0.0936	3,010.0736

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.12	0.00	1.03	16.21	0.00	2.31

3.0 Construction Detail**Construction Phase**

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/3/2022	2/11/2022	5	30	
2	Grading	Grading	2/12/2022	3/25/2022	5	30	
3	Building Construction	Building Construction	3/28/2022	11/30/2022	5	178	
4	Paving	Paving	12/1/2022	12/30/2022	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

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

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Annual

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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	253.00	99.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Annual

3.2 Site Preparation - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0476	0.4963	0.2955	5.7000e-004	0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0476	0.4963	0.2955	5.7000e-004	0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0476	0.4963	0.2955	5.7000e-004	0.2710	0.0242	0.2952	0.1490	0.0223	0.1712	0.0000	50.1591	50.1591	0.0162	0.0000	50.5647

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	1.0500e-003	7.5000e-004	8.7000e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4904	2.4904	6.0000e-005	0.0000	2.4920
Total	1.0500e-003	7.5000e-004	8.7000e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4904	2.4904	6.0000e-005	0.0000	2.4920

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Annual

3.2 Site Preparation - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust	0.0476	0.4963	0.2955	5.7000e-004	0.1057	0.0000	0.1057	0.0581	0.0000	0.0581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0476	0.4963	0.2955	5.7000e-004	0.1057	0.0000	0.1057	0.0581	0.0000	0.0581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0476	0.4963	0.2955	5.7000e-004	0.1057	0.0242	0.1299	0.0581	0.0223	0.0803	0.0000	50.1590	50.1590	0.0162	0.0000	50.5646

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	1.0500e-003	7.5000e-004	8.7000e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4904	2.4904	6.0000e-005	0.0000	2.4920
Total	1.0500e-003	7.5000e-004	8.7000e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4904	2.4904	6.0000e-005	0.0000	2.4920

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3.3 Grading - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust	0.0544	0.5827	0.4356	9.3000e-004	0.1898	0.0000	0.1898	0.0604	0.0000	0.0604	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004	0.1898	0.0000	0.1898	0.0604	0.0000	0.0604	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0544	0.5827	0.4356	9.3000e-004	0.1898	0.0245	0.2143	0.0604	0.0226	0.0830	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	1.1700e-003	8.4000e-004	9.6700e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.7672	2.7672	7.0000e-005	0.0000	2.7689
Total	1.1700e-003	8.4000e-004	9.6700e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.7672	2.7672	7.0000e-005	0.0000	2.7689

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3.3 Grading - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					0.0740	0.0000	0.0740	0.0236	0.0000	0.0236	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632
Total	0.0544	0.5827	0.4356	9.3000e-004	0.0740	0.0245	0.0985	0.0236	0.0226	0.0461	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	1.1700e-003	8.4000e-004	9.6700e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.7672	2.7672	7.0000e-005	0.0000	2.7689
Total	1.1700e-003	8.4000e-004	9.6700e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.7672	2.7672	7.0000e-005	0.0000	2.7689

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3.4 Building Construction - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr										MT/yr						
Off-Road	0.1519	1.3898	1.4563	2.4000e-003		0.0720	0.0720		0.0677	0.0677	0.0000	206.2355	206.2355	0.0494	0.0000	207.4707
Total	0.1519	1.3898	1.4563	2.4000e-003		0.0720	0.0720		0.0677	0.0677	0.0000	206.2355	206.2355	0.0494	0.0000	207.4707

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0238	0.8132	0.2051	2.1800e-003	0.0555	1.5200e-003	0.0571	0.0160	1.4500e-003	0.0175	0.0000	212.0470	212.0470	0.0133	0.0000	212.3798
Worker	0.0879	0.0627	0.7257	2.3000e-003	0.2470	1.8100e-003	0.2489	0.0656	1.6700e-003	0.0673	0.0000	207.6938	207.6938	5.2400e-003	0.0000	207.8247
Total	0.1117	0.8760	0.9307	4.4800e-003	0.3026	3.3300e-003	0.3059	0.0816	3.1200e-003	0.0847	0.0000	419.7408	419.7408	0.0186	0.0000	420.2045

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3.4 Building Construction - 2022**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	0.1519	1.3898	1.4563	2.4000e-003		0.0720	0.0720		0.0677	0.0677	0.0000	206.2352	206.2352	0.0494	0.0000	207.4704
Total	0.1519	1.3898	1.4563	2.4000e-003		0.0720	0.0720		0.0677	0.0677	0.0000	206.2352	206.2352	0.0494	0.0000	207.4704

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	0.0238	0.8132	0.2051	2.1800e-003	0.0555	1.5200e-003	0.0571	0.0160	1.4500e-003	0.0175	0.0000	212.0470	212.0470	0.0133	0.0000	212.3798
Worker	0.0879	0.0627	0.7257	2.3000e-003	0.2470	1.8100e-003	0.2489	0.0656	1.6700e-003	0.0673	0.0000	207.6938	207.6938	5.2400e-003	0.0000	207.8247
Total	0.1117	0.8760	0.9307	4.4800e-003	0.3026	3.3300e-003	0.3059	0.0816	3.1200e-003	0.0847	0.0000	419.7408	419.7408	0.0186	0.0000	420.2045

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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	0.0121	0.1224	0.1604	2.5000e-004		6.2500e-003	6.2500e-003		5.7500e-003	5.7500e-003	0.0000	22.0303	22.0303	7.1300e-003	0.0000	22.2084
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0121	0.1224	0.1604	2.5000e-004		6.2500e-003	6.2500e-003		5.7500e-003	5.7500e-003	0.0000	22.0303	22.0303	7.1300e-003	0.0000	22.2084

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.6000e-004	5.3200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5219	1.5219	4.0000e-005	0.0000	1.5229
Total	6.4000e-004	4.6000e-004	5.3200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5219	1.5219	4.0000e-005	0.0000	1.5229

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3.5 Paving - 2022**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	0.0121	0.1224	0.1604	2.5000e-004		6.2500e-003	6.2500e-003		5.7500e-003	5.7500e-003	0.0000	22.0303	22.0303	7.1300e-003	0.0000	22.2084
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0121	0.1224	0.1604	2.5000e-004		6.2500e-003	6.2500e-003		5.7500e-003	5.7500e-003	0.0000	22.0303	22.0303	7.1300e-003	0.0000	22.2084

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.6000e-004	5.3200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5219	1.5219	4.0000e-005	0.0000	1.5229
Total	6.4000e-004	4.6000e-004	5.3200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5219	1.5219	4.0000e-005	0.0000	1.5229

4.0 Operational Detail - Mobile

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated	6.6000e-003					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	678.9250	678.9250	0.0149	3.2300e-003	680.2581
Electricity Unmitigated	6.6000e-003					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	678.9250	678.9250	0.0149	3.2300e-003	680.2581
NaturalGas Mitigated	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003	4.5600e-003	4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212
NaturalGas Unmitigated	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003	4.5600e-003	4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212

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5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	1.22429e+006	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212
Total		6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212

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					
Unrefrigerated Warehouse-No Rail	1.22429e+006	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212
Total		6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	1.42332e+006	678.9250	0.0149	3.2300e-003	680.2581
Total		678.9250	0.0149	3.2300e-003	680.2581

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	1.42332e+006	678.9250	0.0149	3.2300e-003	680.2581
Total		678.9250	0.0149	3.2300e-003	680.2581

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Mitigated	2.4596	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160	
Unmitigated	2.4596	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160	

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	0.2795					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Consumer Products	2.1793					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Landscaping	7.1000e-004	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160
Total	2.4596	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2795					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1793					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.1000e-004	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160
Total	2.4596	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	728.3853	3.6508	0.0891	846.2185
Unmitigated	728.3853	3.6508	0.0891	846.2185

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	111.574 / 0	728.3853	3.6508	0.0891	846.2185
Total		728.3853	3.6508	0.0891	846.2185

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	111.57470	728.3853	3.6508	0.0891	846.2185
Total		728.3853	3.6508	0.0891	846.2185

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	86.3082	5.1007	0.0000	213.8249
Unmitigated	115.0776	6.8009	0.0000	285.0999

8.2 Waste by Land UseUnmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	566.91	115.0776	6.8009	0.0000	285.0999
Total		115.0776	6.8009	0.0000	285.0999

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	425.183	86.3082	5.1007	0.0000	213.8249
Total		86.3082	5.1007	0.0000	213.8249

9.0 Operational Offroad

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

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

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

Equipment Type	Number
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11.0 Vegetation

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9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Annual

9309 Sycamore Hills Distribution Center - Trucks
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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	603.10	1000sqft	37.00	603,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MW/hr)	1051.61	CH4 Intensity (lb/MW/hr)	0.023	N2O Intensity (lb/MW/hr)	0.005

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - RPS - 33% goal by 2020, 18.4% accounted for in CalEEMod

Land Use - 37 acre site
603,100 sf

Construction Phase - 6 weeks - grading
2 months - slab, walls, concrete
1 month - roof

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - 847 ADT
Trucks - 274 (0.45 trips/ksf)
38.7 mile trip length

Energy Use -

Water And Wastewater - CalGreen requires 20% reduction in indoor water use (111,573,500 gallons)

Construction Off-road Equipment Mitigation - 61% reduction

Waste Mitigation -

Fleet Mix - Trucks only, mix per TIA

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	55	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	55	61
tblConstructionPhase	NumDays	740.00	178.00
tblConstructionPhase	NumDays	75.00	30.00
tblConstructionPhase	NumDays	55.00	22.00
tblConstructionPhase	PhaseEndDate	3/28/2025	11/30/2022
tblConstructionPhase	PhaseEndDate	5/27/2022	3/25/2022
tblConstructionPhase	PhaseEndDate	6/13/2025	12/30/2022
tblConstructionPhase	PhaseStartDate	5/28/2022	3/28/2022

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tblConstructionPhase	PhaseStartDate	3/29/2025	12/1/2022
tblFleetMix	HHD	0.03	0.37
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.17
tblFleetMix	LHD2	5.8470e-003	0.21
tblFleetMix	MCY	4.8220e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.6900e-004	0.00
tblFleetMix	MHD	0.02	0.25
tblFleetMix	OBUS	2.1100e-003	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	UBUS	1.7690e-003	0.00
tblGrading	AcresOfGrading	75.00	187.50
tblLandUse	LotAcreage	13.85	37.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	1325.65	1051.61
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	CC_TL	8.40	38.70
tblVehicleTrips	CNW_TL	6.90	38.70
tblVehicleTrips	CW_TL	16.60	38.70
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	0.45
tblVehicleTrips	SU_TR	1.68	0.45

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tblVehicleTrips	WD_TR	1.68	0.45
tblWater	IndoorWaterUseRate	139,466,875.00	111,573,500.00

2.0 Emissions Summary

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2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3804	3.4691	3.3022	8.7000e-003	0.7714	0.1304	0.9017	0.2931	0.1215	0.4146	0.0000	786.7471	786.7471	0.1179	0.0000	789.6954
Maximum	0.3804	3.4691	3.3022	8.7000e-003	0.7714	0.1304	0.9017	0.2931	0.1215	0.4146	0.0000	786.7471	786.7471	0.1179	0.0000	789.6954

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3804	3.4691	3.3022	8.7000e-003	0.4903	0.1304	0.6207	0.1654	0.1215	0.2869	0.0000	786.7467	786.7467	0.1179	0.0000	789.6950
Maximum	0.3804	3.4691	3.3022	8.7000e-003	0.4903	0.1304	0.6207	0.1654	0.1215	0.2869	0.0000	786.7467	786.7467	0.1179	0.0000	789.6950

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	36.44	0.00	31.17	43.57	0.00	30.80	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	1.2195	1.2195
2	4-3-2022	7-2-2022	0.9167	0.9167
3	7-3-2022	9-30-2022	0.9066	0.9066
		Highest	1.2195	1.2195

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.4596	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160
Energy	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	744.2579	744.2579	0.0161	4.4300e-003	745.9793
Mobile	0.2951	6.7559	3.0128	0.0447	1.6875	0.0277	1.7152	0.4817	0.0265	0.5082	0.0000	4,316.1997	4,316.1997	0.1678	0.0000	4,320.3946
Waste						0.0000	0.0000		0.0000	0.0000	115.0776	0.0000	115.0776	6.8009	0.0000	285.0999
Water						0.0000	0.0000		0.0000	0.0000	35.3971	692.9882	728.3853	3.6508	0.0891	846.2185
Total	2.7613	6.8160	3.0709	0.0451	1.6875	0.0323	1.7198	0.4817	0.0311	0.5128	150.4747	5,753.4608	5,903.9355	10.6356	0.0936	6,197.7083

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2.2 Overall Operational**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Area	2.4596	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160
Energy	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	744.2579	744.2579	0.0161	4.4300e-003	745.9793
Mobile	0.2951	6.7559	3.0128	0.0447	1.6875	0.0277	1.7152	0.4817	0.0265	0.5082	0.0000	4,316.199 ₇	4,316.199 ₇	0.1678	0.0000	4,320.394 ₆
Waste						0.0000	0.0000		0.0000	0.0000	86.3082	0.0000	86.3082	5.1007	0.0000	213.8249
Water						0.0000	0.0000		0.0000	0.0000	35.3971	692.9882	728.3853	3.6508	0.0891	846.2185
Total	2.7613	6.8160	3.0709	0.0451	1.6875	0.0323	1.7198	0.4817	0.0311	0.5128	121.7053	5,753.460₈	5,875.166₁	8.9354	0.0936	6,126.433₃

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.12	0.00	0.49	15.99	0.00	1.15

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/3/2022	2/11/2022	5	30	
2	Grading	Grading	2/12/2022	3/25/2022	5	30	
3	Building Construction	Building Construction	3/28/2022	11/30/2022	5	178	
4	Paving	Paving	12/1/2022	12/30/2022	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

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

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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	253.00	99.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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3.2 Site Preparation - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0476	0.4963	0.2955	5.7000e-004	0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0476	0.4963	0.2955	5.7000e-004	0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0476	0.4963	0.2955	5.7000e-004	0.2710	0.0242	0.2952	0.1490	0.0223	0.1712	0.0000	50.1591	50.1591	0.0162	0.0000	50.5647

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	1.0500e-003	7.5000e-004	8.7000e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4904	2.4904	6.0000e-005	0.0000	2.4920
Total	1.0500e-003	7.5000e-004	8.7000e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4904	2.4904	6.0000e-005	0.0000	2.4920

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3.2 Site Preparation - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust	0.0476	0.4963	0.2955	5.7000e-004	0.1057	0.0000	0.1057	0.0581	0.0000	0.0581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0476	0.4963	0.2955	5.7000e-004	0.1057	0.0000	0.1057	0.0581	0.0000	0.0581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0476	0.4963	0.2955	5.7000e-004	0.1057	0.0242	0.1299	0.0581	0.0223	0.0803	0.0000	50.1590	50.1590	0.0162	0.0000	50.5646

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	1.0500e-003	7.5000e-004	8.7000e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4904	2.4904	6.0000e-005	0.0000	2.4920
Total	1.0500e-003	7.5000e-004	8.7000e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4904	2.4904	6.0000e-005	0.0000	2.4920

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3.3 Grading - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust	0.0544	0.5827	0.4356	9.3000e-004	0.1898	0.0000	0.1898	0.0604	0.0000	0.0604	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004	0.1898	0.0000	0.1898	0.0604	0.0000	0.0604	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0544	0.5827	0.4356	9.3000e-004	0.1898	0.0245	0.2143	0.0604	0.0226	0.0830	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	1.1700e-003	8.4000e-004	9.6700e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.7672	2.7672	7.0000e-005	0.0000	2.7689
Total	1.1700e-003	8.4000e-004	9.6700e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.7672	2.7672	7.0000e-005	0.0000	2.7689

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3.3 Grading - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust	0.0544	0.5827	0.4356	9.3000e-004	0.0740	0.0000	0.0740	0.0236	0.0000	0.0236	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004	0.0740	0.0000	0.0740	0.0236	0.0000	0.0236	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0544	0.5827	0.4356	9.3000e-004	0.0740	0.0245	0.0985	0.0236	0.0226	0.0461	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	1.1700e-003	8.4000e-004	9.6700e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.7672	2.7672	7.0000e-005	0.0000	2.7689
Total	1.1700e-003	8.4000e-004	9.6700e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3200e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.7672	2.7672	7.0000e-005	0.0000	2.7689

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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	0.1519	1.3898	1.4563	2.4000e-003		0.0720	0.0720		0.0677	0.0677	0.0000	206.2355	206.2355	0.0494	0.0000	207.4707
Total	0.1519	1.3898	1.4563	2.4000e-003		0.0720	0.0720		0.0677	0.0677	0.0000	206.2355	206.2355	0.0494	0.0000	207.4707

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	0.0238	0.8132	0.2051	2.1800e-003	0.0555	1.5200e-003	0.0571	0.0160	1.4500e-003	0.0175	0.0000	212.0470	212.0470	0.0133	0.0000	212.3798
Worker	0.0879	0.0627	0.7257	2.3000e-003	0.2470	1.8100e-003	0.2489	0.0656	1.6700e-003	0.0673	0.0000	207.6938	207.6938	5.2400e-003	0.0000	207.8247
Total	0.1117	0.8760	0.9307	4.4800e-003	0.3026	3.3300e-003	0.3059	0.0816	3.1200e-003	0.0847	0.0000	419.7408	419.7408	0.0186	0.0000	420.2045

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3.4 Building Construction - 2022**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	0.1519	1.3898	1.4563	2.4000e-003		0.0720	0.0720		0.0677	0.0677	0.0000	206.2352	206.2352	0.0494	0.0000	207.4704
Total	0.1519	1.3898	1.4563	2.4000e-003		0.0720	0.0720		0.0677	0.0677	0.0000	206.2352	206.2352	0.0494	0.0000	207.4704

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	0.0238	0.8132	0.2051	2.1800e-003	0.0555	1.5200e-003	0.0571	0.0160	1.4500e-003	0.0175	0.0000	212.0470	212.0470	0.0133	0.0000	212.3798
Worker	0.0879	0.0627	0.7257	2.3000e-003	0.2470	1.8100e-003	0.2489	0.0656	1.6700e-003	0.0673	0.0000	207.6938	207.6938	5.2400e-003	0.0000	207.8247
Total	0.1117	0.8760	0.9307	4.4800e-003	0.3026	3.3300e-003	0.3059	0.0816	3.1200e-003	0.0847	0.0000	419.7408	419.7408	0.0186	0.0000	420.2045

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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	0.0121	0.1224	0.1604	2.5000e-004		6.2500e-003	6.2500e-003		5.7500e-003	5.7500e-003	0.0000	22.0303	22.0303	7.1300e-003	0.0000	22.2084
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0121	0.1224	0.1604	2.5000e-004		6.2500e-003	6.2500e-003		5.7500e-003	5.7500e-003	0.0000	22.0303	22.0303	7.1300e-003	0.0000	22.2084

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.6000e-004	5.3200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5219	1.5219	4.0000e-005	0.0000	1.5229
Total	6.4000e-004	4.6000e-004	5.3200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5219	1.5219	4.0000e-005	0.0000	1.5229

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3.5 Paving - 2022**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	0.0121	0.1224	0.1604	2.5000e-004		6.2500e-003	6.2500e-003		5.7500e-003	5.7500e-003	0.0000	22.0303	22.0303	7.1300e-003	0.0000	22.2084
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0121	0.1224	0.1604	2.5000e-004		6.2500e-003	6.2500e-003		5.7500e-003	5.7500e-003	0.0000	22.0303	22.0303	7.1300e-003	0.0000	22.2084

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.6000e-004	5.3200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5219	1.5219	4.0000e-005	0.0000	1.5229
Total	6.4000e-004	4.6000e-004	5.3200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5219	1.5219	4.0000e-005	0.0000	1.5229

4.0 Operational Detail - Mobile

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated	6.6000e-003					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	678.9250	678.9250	0.0149	3.2300e-003	680.2581
Electricity Unmitigated	6.6000e-003					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	678.9250	678.9250	0.0149	3.2300e-003	680.2581
NaturalGas Mitigated	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003	4.5600e-003	4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212
NaturalGas Unmitigated	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003	4.5600e-003	4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212

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5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	1.22429e+006	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212
Total		6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212

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					
Unrefrigerated Warehouse-No Rail	1.22429e+006	6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212
Total		6.6000e-003	0.0600	0.0504	3.6000e-004		4.5600e-003	4.5600e-003		4.5600e-003	4.5600e-003	0.0000	65.3329	65.3329	1.2500e-003	1.2000e-003	65.7212

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	1.42332e+006	678.9250	0.0149	3.2300e-003	680.2581
Total		678.9250	0.0149	3.2300e-003	680.2581

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	1.42332e+006	678.9250	0.0149	3.2300e-003	680.2581
Total		678.9250	0.0149	3.2300e-003	680.2581

6.0 Area Detail

6.1 Mitigation Measures Area

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2795					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1793					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.1000e-004	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160
Total	2.4596	7.0000e-005	7.7000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0150	0.0150	4.0000e-005	0.0000	0.0160

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	728.3853	3.6508	0.0891	846.2185
Unmitigated	728.3853	3.6508	0.0891	846.2185

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	111.574 / 0	728.3853	3.6508	0.0891	846.2185
Total		728.3853	3.6508	0.0891	846.2185

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	111.5747 0	728.3853	3.6508	0.0891	846.2185
Total		728.3853	3.6508	0.0891	846.2185

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	86.3082	5.1007	0.0000	213.8249
Unmitigated	115.0776	6.8009	0.0000	285.0999

8.2 Waste by Land UseUnmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	566.91	115.0776	6.8009	0.0000	285.0999
Total		115.0776	6.8009	0.0000	285.0999

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	425.183	86.3082	5.1007	0.0000	213.8249
Total		86.3082	5.1007	0.0000	213.8249

9.0 Operational Offroad

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

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

Boilers

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

Equipment Type	Number
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11.0 Vegetation

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Annual

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

9309 Sycamore Hills Distribution Center - Passenger Cars
South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	603.10	1000sqft	37.00	603,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MW/hr)	1051.61	CH4 Intensity (lb/MW/hr)	0.023	N2O Intensity (lb/MW/hr)	0.005

1.3 User Entered Comments & Non-Default Data

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

Project Characteristics - RPS - 33% goal by 2020, 18.4% accounted for in CalEEMod

Land Use - 37 acre site

603,100 sf

Construction Phase - 6 weeks - grading

2 months - slab, walls, concrete

1 month - roof

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - 847 ADT

Passenger cars - 573 (0.95 trips/kfsf)

24.2 mile trip length

Energy Use -

Water And Wastewater - CalGreen requires 20% reduction in indoor water use (111,573,500 gallons)

Construction Off-road Equipment Mitigation - 61% reduction

Waste Mitigation -

Fleet Mix - Passenger cars only

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	55	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	55	61
tblConstructionPhase	NumDays	740.00	178.00
tblConstructionPhase	NumDays	75.00	30.00
tblConstructionPhase	NumDays	55.00	22.00
tblConstructionPhase	PhaseEndDate	3/28/2025	11/30/2022
tblConstructionPhase	PhaseEndDate	5/27/2022	3/25/2022
tblConstructionPhase	PhaseEndDate	6/13/2025	12/30/2022
tblConstructionPhase	PhaseStartDate	5/28/2022	3/28/2022

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

tblConstructionPhase	PhaseStartDate	3/29/2025	12/1/2022
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	1.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.8470e-003	0.00
tblFleetMix	MCY	4.8220e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.6900e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.1100e-003	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	UBUS	1.7690e-003	0.00
tblGrading	AcresOfGrading	75.00	187.50
tblLandUse	LotAcreage	13.85	37.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	1325.65	1051.61
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	CC_TL	8.40	24.20
tblVehicleTrips	CNW_TL	6.90	24.20
tblVehicleTrips	CW_TL	16.60	24.20
tblVehicleTrips	ST_TR	1.68	0.95
tblVehicleTrips	SU_TR	1.68	0.95
tblVehicleTrips	WD_TR	1.68	0.95
tblWater	IndoorWaterUseRate	139,466,875.00	111,573,500.00

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

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															
2022	3.7033	38.8928	29.7359	0.0788	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	7,911.3746	7,911.3746	1.9496	0.0000	7,932.3804
Maximum	3.7033	38.8928	29.7359	0.0788	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	7,911.3746	7,911.3746	1.9496	0.0000	7,932.3804

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															
2022	3.7033	38.8928	29.7359	0.0788	7.2470	1.6365	8.8611	3.9263	1.5056	5.4112	0.0000	7,911.3746	7,911.3746	1.9496	0.0000	7,932.3804
Maximum	3.7033	38.8928	29.7359	0.0788	7.2470	1.6365	8.8611	3.9263	1.5056	5.4112	0.0000	7,911.3746	7,911.3746	1.9496	0.0000	7,932.3804

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, 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	60.33	0.00	55.43	60.67	0.00	52.82	0.00	0.00	0.00	0.00	0.00	0.00

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

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	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Energy	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Mobile	0.6922	1.2008	19.2963	0.0769	9.8239	0.0587	9.8826	2.6042	0.0541	2.6583		7,674.072 ₆	7,674.072 ₆	0.1357		7,677.463 ₈
Total	14.2072	1.5302	19.6341	0.0789	9.8239	0.0839	9.9078	2.6042	0.0793	2.6835		8,068.819₆	8,068.819₆	0.1436	7.2300e-003	8,074.564₅

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	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Energy	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Mobile	0.6922	1.2008	19.2963	0.0769	9.8239	0.0587	9.8826	2.6042	0.0541	2.6583		7,674.072 ₆	7,674.072 ₆	0.1357		7,677.463 ₈
Total	14.2072	1.5302	19.6341	0.0789	9.8239	0.0839	9.9078	2.6042	0.0793	2.6835		8,068.819₆	8,068.819₆	0.1436	7.2300e-003	8,074.564₅

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, 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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/3/2022	2/11/2022	5	30	
2	Grading	Grading	2/12/2022	3/25/2022	5	30	
3	Building Construction	Building Construction	3/28/2022	11/30/2022	5	178	
4	Paving	Paving	12/1/2022	12/30/2022	5	22	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 187.5****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**

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	253.00	99.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

3.2 Site Preparation - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126	1.4836	1.4836	1.4836		3.686.061 ₉	3.686.061 ₉	1.1922		3,715.865 ₅
Total	3.1701	33.0835	19.6978	0.0380	18.0663	1.6126	19.6788	9.9307	1.4836	11.4143		3,686.061₉	3,686.061₉	1.1922		3,715.865₅

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															
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	0.0707	0.0444	0.6250	1.9300e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		192.1074	192.1074	4.8500e-003		192.2287
Total	0.0707	0.0444	0.6250	1.9300e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		192.1074	192.1074	4.8500e-003		192.2287

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

3.2 Site Preparation - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380	1.6126	1.6126	1.6126	1.4836	1.4836	1.4836	0.0000	3.686.061 ₉	3.686.061 ₉	1.1922		3,715.865 ₅
Total	3.1701	33.0835	19.6978	0.0380	7.0458	1.6126	8.6584	3.8730	1.4836	5.3565	0.0000	3,686.061 ₉	3,686.061 ₉	1.1922		3,715.865 ₅

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0707	0.0444	0.6250	1.9300e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		192.1074	192.1074	4.8500e-003		192.2287
Total	0.0707	0.0444	0.6250	1.9300e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		192.1074	192.1074	4.8500e-003		192.2287

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

3.3 Grading - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					12.6502	0.0000	12.6502	4.0259	0.0000	4.0259			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349	1.5041	1.5041	1.5041		6.011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	12.6502	1.6349	14.2851	4.0259	1.5041	5.5300		6,011.4105	6,011.4105	1.9442		6,060.0158

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0785	0.0493	0.6944	2.1400e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		213.4526	213.4526	5.3900e-003		213.5875
Total	0.0785	0.0493	0.6944	2.1400e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		213.4526	213.4526	5.3900e-003		213.5875

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

3.3 Grading - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust	3.6248	38.8435	29.0415	0.0621	4.9336	0.0000	4.9336	1.5701	0.0000	1.5701	0.0000	0.0000	0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621	4.9336	0.0000	4.9336	1.5701	0.0000	1.5701	0.0000	0.0000	0.0000	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	4.9336	1.6349	6.5685	1.5701	1.5041	3.0742	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0785	0.0493	0.6944	2.1400e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		213.4526	213.4526	5.3900e-003		213.5875
Total	0.0785	0.0493	0.6944	2.1400e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		213.4526	213.4526	5.3900e-003		213.5875

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

3.4 Building Construction - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.333 6	2,554.333 6	0.6120		2,569.632 2

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
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	0.2614	9.0054	2.1797	0.0248	0.6335	0.0168	0.6503	0.1824	0.0161	0.1985		2,656.865 3	2,656.865 3	0.1601		2,660.866 6
Worker	0.9933	0.6239	8.7846	0.0271	2.8279	0.0203	2.8483	0.7500	0.0187	0.7687		2,700.175 8	2,700.175 8	0.0682		2,701.881 6
Total	1.2547	9.6293	10.9643	0.0519	3.4614	0.0372	3.4986	0.9323	0.0348	0.9672		5,357.041 0	5,357.041 0	0.2283		5,362.748 2

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

3.4 Building Construction - 2022**Mitigated Construction On-Site**

	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
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	2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2

Mitigated Construction Off-Site

	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
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	0.2614	9.0054	2.1797	0.0248	0.6335	0.0168	0.6503	0.1824	0.0161	0.1985		2,656.865 3	2,656.865 3	0.1601		2,660.866 6
Worker	0.9933	0.6239	8.7846	0.0271	2.8279	0.0203	2.8483	0.7500	0.0187	0.7687		2,700.175 8	2,700.175 8	0.0682		2,701.881 6
Total	1.2547	9.6293	10.9643	0.0519	3.4614	0.0372	3.4986	0.9323	0.0348	0.9672		5,357.041 0	5,357.041 0	0.2283		5,362.748 2

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

3.5 Paving - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.660 ₃	2,207.660 ₃	0.7140		2,225.510 ₄
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

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0589	0.0370	0.5208	1.6100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		160.0895	160.0895	4.0500e-003		160.1906
Total	0.0589	0.0370	0.5208	1.6100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		160.0895	160.0895	4.0500e-003		160.1906

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

3.5 Paving - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 ₃	2,207.660 ₃	0.7140		2,225.510 ₄
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

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0589	0.0370	0.5208	1.6100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		160.0895	160.0895	4.0500e-003		160.1906
Total	0.0589	0.0370	0.5208	1.6100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		160.0895	160.0895	4.0500e-003		160.1906

4.0 Operational Detail - Mobile

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

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					
Natural Gas Mitigated	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250	0.0250	0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Natural Gas Unmitigated	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250	0.0250	0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Unrefrigerated Warehouse-No Rail	3354.23	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Total		0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600

Mitigated

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Unrefrigerated Warehouse-No Rail	3354.23	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Total		0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600

6.0 Area Detail**6.1 Mitigation Measures Area**

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Unmitigated	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	1.5317					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9414					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.7000e-003	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Total	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

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	1.5317					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9414					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.7000e-003	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Total	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

9.0 Operational Offroad

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

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Summer

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

9309 Sycamore Hills Distribution Center - Trucks
South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	603.10	1000sqft	37.00	603,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MW/hr)	1051.61	CH4 Intensity (lb/MW/hr)	0.023	N2O Intensity (lb/MW/hr)	0.005

1.3 User Entered Comments & Non-Default Data

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

Project Characteristics - RPS - 33% goal by 2020, 18.4% accounted for in CalEEMod

Land Use - 37 acre site
603,100 sfConstruction Phase - 6 weeks - grading
2 months - slab, walls, concrete
1 month - roof

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - 847 ADT

Trucks - 274 (0.45 trips/ksf)

38.7 mile trip length

Energy Use -

Water And Wastewater - CalGreen requires 20% reduction in indoor water use (111,573,500 gallons)

Construction Off-road Equipment Mitigation - 61% reduction

Waste Mitigation -

Fleet Mix - Trucks only, mix per TIA

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	55	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	55	61
tblConstructionPhase	NumDays	740.00	178.00
tblConstructionPhase	NumDays	75.00	30.00
tblConstructionPhase	NumDays	55.00	22.00
tblConstructionPhase	PhaseEndDate	3/28/2025	11/30/2022
tblConstructionPhase	PhaseEndDate	5/27/2022	3/25/2022
tblConstructionPhase	PhaseEndDate	6/13/2025	12/30/2022
tblConstructionPhase	PhaseStartDate	5/28/2022	3/28/2022

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

tblConstructionPhase	PhaseStartDate	3/29/2025	12/1/2022
tblFleetMix	HHD	0.03	0.37
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.17
tblFleetMix	LHD2	5.8470e-003	0.21
tblFleetMix	MCY	4.8220e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.6900e-004	0.00
tblFleetMix	MHD	0.02	0.25
tblFleetMix	OBUS	2.1100e-003	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	UBUS	1.7690e-003	0.00
tblGrading	AcresOfGrading	75.00	187.50
tblLandUse	LotAcreage	13.85	37.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	1325.65	1051.61
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	CC_TL	8.40	38.70
tblVehicleTrips	CNW_TL	6.90	38.70
tblVehicleTrips	CW_TL	16.60	38.70
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	0.45
tblVehicleTrips	SU_TR	1.68	0.45

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

tblVehicleTrips	WD_TR	1.68	0.45
tblWater	IndoorWaterUseRate	139,466,875.00	111,573,500.00

2.0 Emissions Summary

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

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					
2022	3.7033	38.8928	29.7359	0.0788	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	7,911.3746	7,911.3746	1.9496	0.0000	7,932.3804
Maximum	3.7033	38.8928	29.7359	0.0788	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	7,911.3746	7,911.3746	1.9496	0.0000	7,932.3804

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					
2022	3.7033	38.8928	29.7359	0.0788	7.2470	1.6365	8.8611	3.9263	1.5056	5.4112	0.0000	7,911.3746	7,911.3746	1.9496	0.0000	7,932.3804
Maximum	3.7033	38.8928	29.7359	0.0788	7.2470	1.6365	8.8611	3.9263	1.5056	5.4112	0.0000	7,911.3746	7,911.3746	1.9496	0.0000	7,932.3804

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	60.33	0.00	55.43	60.67	0.00	52.82	0.00	0.00	0.00	0.00	0.00	0.00

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

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	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Energy	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Mobile	1.6148	35.6706	16.4870	0.2465	9.4194	0.1522	9.5715	2.6828	0.1454	2.8282		26,231.3235	26,231.3235	1.0112		26,256.6037
Total	15.1298	36.0000	16.8248	0.2485	9.4194	0.1774	9.5967	2.6828	0.1706	2.8534		26,626.0705	26,626.0705	1.0191	7.2300e-003	26,653.7043

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	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Energy	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Mobile	1.6148	35.6706	16.4870	0.2465	9.4194	0.1522	9.5715	2.6828	0.1454	2.8282		26,231.3235	26,231.3235	1.0112		26,256.6037
Total	15.1298	36.0000	16.8248	0.2485	9.4194	0.1774	9.5967	2.6828	0.1706	2.8534		26,626.0705	26,626.0705	1.0191	7.2300e-003	26,653.7043

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, 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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/3/2022	2/11/2022	5	30	
2	Grading	Grading	2/12/2022	3/25/2022	5	30	
3	Building Construction	Building Construction	3/28/2022	11/30/2022	5	178	
4	Paving	Paving	12/1/2022	12/30/2022	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

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

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	253.00	99.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

3.2 Site Preparation - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3.686.061 ₉	3.686.061 ₉	1.1922		3,715.865 ₅
Total	3.1701	33.0835	19.6978	0.0380	18.0663	1.6126	19.6788	9.9307	1.4836	11.4143		3,686.061₉	3,686.061₉	1.1922		3,715.865₅

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	0.0707	0.0444	0.6250	1.9300e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		192.1074	192.1074	4.8500e-003		192.2287
Total	0.0707	0.0444	0.6250	1.9300e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		192.1074	192.1074	4.8500e-003		192.2287

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

3.2 Site Preparation - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380	1.6126	1.6126	1.6126	1.4836	1.4836	1.4836	0.0000	3.686.061 ₉	3.686.061 ₉	1.1922		3,715.865 ₅
Total	3.1701	33.0835	19.6978	0.0380	7.0458	1.6126	8.6584	3.8730	1.4836	5.3565	0.0000	3,686.061 ₉	3,686.061 ₉	1.1922		3,715.865 ₅

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0707	0.0444	0.6250	1.9300e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		192.1074	192.1074	4.8500e-003		192.2287
Total	0.0707	0.0444	0.6250	1.9300e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		192.1074	192.1074	4.8500e-003		192.2287

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

3.3 Grading - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					12.6502	0.0000	12.6502	4.0259	0.0000	4.0259			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	12.6502	1.6349	14.2851	4.0259	1.5041	5.5300		6,011.4105	6,011.4105	1.9442		6,060.0158

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0785	0.0493	0.6944	2.1400e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		213.4526	213.4526	5.3900e-003		213.5875
Total	0.0785	0.0493	0.6944	2.1400e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		213.4526	213.4526	5.3900e-003		213.5875

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

3.3 Grading - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					4.9336	0.0000	4.9336	1.5701	0.0000	1.5701			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	4.9336	1.6349	6.5685	1.5701	1.5041	3.0742	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0785	0.0493	0.6944	2.1400e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		213.4526	213.4526	5.3900e-003		213.5875
Total	0.0785	0.0493	0.6944	2.1400e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		213.4526	213.4526	5.3900e-003		213.5875

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

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		2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.333 6	2,554.333 6	0.6120		2,569.632 2

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	0.2614	9.0054	2.1797	0.0248	0.6335	0.0168	0.6503	0.1824	0.0161	0.1985		2,656.865 3	2,656.865 3	0.1601		2,660.866 6
Worker	0.9933	0.6239	8.7846	0.0271	2.8279	0.0203	2.8483	0.7500	0.0187	0.7687		2,700.175 8	2,700.175 8	0.0682		2,701.881 6
Total	1.2547	9.6293	10.9643	0.0519	3.4614	0.0372	3.4986	0.9323	0.0348	0.9672		5,357.041 0	5,357.041 0	0.2283		5,362.748 2

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3.4 Building Construction - 2022**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	2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2

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	0.2614	9.0054	2.1797	0.0248	0.6335	0.0168	0.6503	0.1824	0.0161	0.1985		2,656.865 3	2,656.865 3	0.1601		2,660.866 6
Worker	0.9933	0.6239	8.7846	0.0271	2.8279	0.0203	2.8483	0.7500	0.0187	0.7687		2,700.175 8	2,700.175 8	0.0682		2,701.881 6
Total	1.2547	9.6293	10.9643	0.0519	3.4614	0.0372	3.4986	0.9323	0.0348	0.9672		5,357.041 0	5,357.041 0	0.2283		5,362.748 2

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3.5 Paving - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679	0.5225	0.5225	0.5225		2,207.660 ₃	2,207.660 ₃	0.7140		2,225.510 ₄
Paving	0.0000					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	0.5225		2,207.660₃	2,207.660₃	0.7140		2,225.510₄

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0589	0.0370	0.5208	1.6100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		160.0895	160.0895	4.0500e-003		160.1906
Total	0.0589	0.0370	0.5208	1.6100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		160.0895	160.0895	4.0500e-003		160.1906

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

3.5 Paving - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679	0.5225	0.5225	0.5225	0.0000	2,207.660 ₃	2,207.660 ₃	0.7140		2,225.510 ₄
Paving	0.0000					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	0.5225	0.0000	2,207.660₃	2,207.660₃	0.7140		2,225.510₄

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0589	0.0370	0.5208	1.6100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		160.0895	160.0895	4.0500e-003		160.1906
Total	0.0589	0.0370	0.5208	1.6100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		160.0895	160.0895	4.0500e-003		160.1906

4.0 Operational Detail - Mobile

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

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	1.6148	35.6706	16.4870	0.2465	9.4194	0.1522	9.5715	2.6828	0.1454	2.8282		26,231.32	26,231.32	1.0112		26,256.60
												35	35			37
Unmitigated	1.6148	35.6706	16.4870	0.2465	9.4194	0.1522	9.5715	2.6828	0.1454	2.8282		26,231.32	26,231.32	1.0112		26,256.60
												35	35			37

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT		Annual VMT	
Unrefrigerated Warehouse-No Rail	271.40	271.40	271.40	3,823,087		3,823,087	
Total	271.40	271.40	271.40	3,823,087		3,823,087	

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No Rail	38.70	38.70	38.70	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHH	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.167900	0.208000	0.254600	0.369500	0.000000	0.000000	0.000000	0.000000	0.000000

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

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					
Natural Gas Mitigated	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Natural Gas Unmitigated	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Unrefrigerated Warehouse-No Rail	3354.23	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Total		0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600

Mitigated

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Unrefrigerated Warehouse-No Rail	3354.23	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Total		0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600

6.0 Area Detail**6.1 Mitigation Measures Area**

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Unmitigated	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	1.5317					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9414					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.7000e-003	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Total	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

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	1.5317					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9414					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.7000e-003	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Total	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

9.0 Operational Offroad

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

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Summer

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

9309 Sycamore Hills Distribution Center - Passenger Cars
South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	603.10	1000sqft	37.00	603,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MW/hr)	1051.61	CH4 Intensity (lb/MW/hr)	0.023	N2O Intensity (lb/MW/hr)	0.005

1.3 User Entered Comments & Non-Default Data

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

Project Characteristics - RPS - 33% goal by 2020, 18.4% accounted for in CalEEMod

Land Use - 37 acre site
603,100 sf

Construction Phase - 6 weeks - grading
2 months - slab, walls, concrete
1 month - roof

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - 847 ADT

Passenger cars - 573 (0.95 trips/kfsf)

24.2 mile trip length

Energy Use -

Water And Wastewater - CalGreen requires 20% reduction in indoor water use (111,573,500 gallons)

Construction Off-road Equipment Mitigation - 61% reduction

Waste Mitigation -

Fleet Mix - Passenger cars only

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	55	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	55	61
tblConstructionPhase	NumDays	740.00	178.00
tblConstructionPhase	NumDays	75.00	30.00
tblConstructionPhase	NumDays	55.00	22.00
tblConstructionPhase	PhaseEndDate	3/28/2025	11/30/2022
tblConstructionPhase	PhaseEndDate	5/27/2022	3/25/2022
tblConstructionPhase	PhaseEndDate	6/13/2025	12/30/2022
tblConstructionPhase	PhaseStartDate	5/28/2022	3/28/2022

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

tblConstructionPhase	PhaseStartDate	3/29/2025	12/1/2022
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	1.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.8470e-003	0.00
tblFleetMix	MCY	4.8220e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.6900e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.1100e-003	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	UBUS	1.7690e-003	0.00
tblGrading	AcresOfGrading	75.00	187.50
tblLandUse	LotAcreage	13.85	37.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	1325.65	1051.61
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	CC_TL	8.40	24.20
tblVehicleTrips	CNW_TL	6.90	24.20
tblVehicleTrips	CW_TL	16.60	24.20
tblVehicleTrips	ST_TR	1.68	0.95
tblVehicleTrips	SU_TR	1.68	0.95
tblVehicleTrips	WD_TR	1.68	0.95
tblWater	IndoorWaterUseRate	139,466,875.00	111,573,500.00

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

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															
2022	3.7116	38.8976	29.6690	0.0765	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	7,670.928 ₉	7,670.928 ₉	1.9493	0.0000	7,692.095 ₇
Maximum	3.7116	38.8976	29.6690	0.0765	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	7,670.928 ₉	7,670.928 ₉	1.9493	0.0000	7,692.095 ₇

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															
2022	3.7116	38.8976	29.6690	0.0765	7.2470	1.6365	8.8611	3.9263	1.5056	5.4112	0.0000	7,670.928 ₉	7,670.928 ₉	1.9493	0.0000	7,692.095 ₇
Maximum	3.7116	38.8976	29.6690	0.0765	7.2470	1.6365	8.8611	3.9263	1.5056	5.4112	0.0000	7,670.928 ₉	7,670.928 ₉	1.9493	0.0000	7,692.095 ₇

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, 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	60.33	0.00	55.43	60.67	0.00	52.82	0.00	0.00	0.00	0.00	0.00	0.00

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

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	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Energy	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Mobile	0.6402	1.3108	17.0546	0.0719	9.8239	0.0587	9.8826	2.6042	0.0541	2.6583		7,182.1385	7,182.1385	0.1255		7,185.2757
Total	14.1552	1.6402	17.3924	0.0739	9.8239	0.0839	9.9078	2.6042	0.0793	2.6835		7,576.8855	7,576.8855	0.1334	7.2300e-003	7,582.3764

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	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Energy	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Mobile	0.6402	1.3108	17.0546	0.0719	9.8239	0.0587	9.8826	2.6042	0.0541	2.6583		7,182.1385	7,182.1385	0.1255		7,185.2757
Total	14.1552	1.6402	17.3924	0.0739	9.8239	0.0839	9.9078	2.6042	0.0793	2.6835		7,576.8855	7,576.8855	0.1334	7.2300e-003	7,582.3764

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, 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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/3/2022	2/11/2022	5	30	
2	Grading	Grading	2/12/2022	3/25/2022	5	30	
3	Building Construction	Building Construction	3/28/2022	11/30/2022	5	178	
4	Paving	Paving	12/1/2022	12/30/2022	5	22	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 187.5****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**

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	253.00	99.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

3.2 Site Preparation - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3.686.061 ₉	3.686.061 ₉	1.1922		3,715.865 ₅
Total	3.1701	33.0835	19.6978	0.0380	18.0663	1.6126	19.6788	9.9307	1.4836	11.4143		3,686.061₉	3,686.061₉	1.1922		3,715.865₅

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
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
Worker	0.0781	0.0487	0.5647	1.8100e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		180.1762	180.1762	4.5400e-003		180.2897
Total	0.0781	0.0487	0.5647	1.8100e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		180.1762	180.1762	4.5400e-003		180.2897

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

3.2 Site Preparation - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380	1.6126	1.6126	1.6126	1.4836	1.4836	1.4836	0.0000	3.686.061 ₉	3.686.061 ₉	1.1922		3,715.865 ₅
Total	3.1701	33.0835	19.6978	0.0380	7.0458	1.6126	8.6584	3.8730	1.4836	5.3565	0.0000	3,686.061 ₉	3,686.061 ₉	1.1922		3,715.865 ₅

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0781	0.0487	0.5647	1.8100e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		180.1762	180.1762	4.5400e-003		180.2897
Total	0.0781	0.0487	0.5647	1.8100e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		180.1762	180.1762	4.5400e-003		180.2897

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

3.3 Grading - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					12.6502	0.0000	12.6502	4.0259	0.0000	4.0259			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349	1.5041	1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	12.6502	1.6349	14.2851	4.0259	1.5041	5.5300		6,011.4105	6,011.4105	1.9442		6,060.0158

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	0.0868	0.0542	0.6275	2.0100e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		200.1958	200.1958	5.0400e-003		200.3219
Total	0.0868	0.0542	0.6275	2.0100e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		200.1958	200.1958	5.0400e-003		200.3219

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

3.3 Grading - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					4.9336	0.0000	4.9336	1.5701	0.0000	1.5701			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	4.9336	1.6349	6.5685	1.5701	1.5041	3.0742	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0868	0.0542	0.6275	2.0100e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		200.1958	200.1958	5.0400e-003		200.3219
Total	0.0868	0.0542	0.6275	2.0100e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		200.1958	200.1958	5.0400e-003		200.3219

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

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		2,554.333 ₆	2,554.333 ₆	0.6120		2,569.632 ₂
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.333 ₆	2,554.333 ₆	0.6120		2,569.632 ₂

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	0.2747	8.9777	2.4237	0.0241	0.6335	0.0174	0.6509	0.1824	0.0166	0.1990		2,584.1189	2,584.1189	0.1709		2,588.391 ₉
Worker	1.0974	0.6850	7.9376	0.0254	2.8279	0.0203	2.8483	0.7500	0.0187	0.7687		2,532.476 ₅	2,532.476 ₅	0.0638		2,534.071 ₆
Total	1.3721	9.6627	10.3613	0.0495	3.4614	0.0377	3.4991	0.9323	0.0354	0.9677		5,116.595 ₃	5,116.595 ₃	0.2347		5,122.463 ₄

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

3.4 Building Construction - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.2747	8.9777	2.4237	0.0241	0.6335	0.0174	0.6509	0.1824	0.0166	0.1990		2,584.1189	2,584.1189	0.1709		2,588.391 9
Worker	1.0974	0.6850	7.9376	0.0254	2.8279	0.0203	2.8483	0.7500	0.0187	0.7687		2,532.476 5	2,532.476 5	0.0638		2,534.071 6
Total	1.3721	9.6627	10.3613	0.0495	3.4614	0.0377	3.4991	0.9323	0.0354	0.9677		5,116.595 3	5,116.595 3	0.2347		5,122.463 4

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

3.5 Paving - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.660 3	2,207.660 3	0.7140		2,225.510 4
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		2,207.660 3	2,207.660 3	0.7140		2,225.510 4

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0651	0.0406	0.4706	1.5100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		150.1468	150.1468	3.7800e-003		150.2414
Total	0.0651	0.0406	0.4706	1.5100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		150.1468	150.1468	3.7800e-003		150.2414

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

3.5 Paving - 2022**Mitigated Construction On-Site**

	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
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	2,207.660 ₃	2,207.660 ₃	0.7140		2,225.510 ₄
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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
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	0.0651	0.0406	0.4706	1.5100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		150.1468	150.1468	3.7800e-003		150.2414
Total	0.0651	0.0406	0.4706	1.5100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		150.1468	150.1468	3.7800e-003		150.2414

4.0 Operational Detail - Mobile

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

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					
Natural Gas Mitigated	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Natural Gas Unmitigated	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Unrefrigerated Warehouse-No Rail	3354.23	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Total		0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600

Mitigated

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Unrefrigerated Warehouse-No Rail	3354.23	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Total		0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600

6.0 Area Detail**6.1 Mitigation Measures Area**

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Unmitigated	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	1.5317					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9414					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.7000e-003	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Total	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

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	1.5317					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9414					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.7000e-003	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Total	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

9.0 Operational Offroad

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

9309 Sycamore Hills Distribution Center - Passenger Cars - South Coast Air Basin, Winter

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

9309 Sycamore Hills Distribution Center - Trucks
South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	603.10	1000sqft	37.00	603,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MW/hr)	1051.61	CH4 Intensity (lb/MW/hr)	0.023	N2O Intensity (lb/MW/hr)	0.005

1.3 User Entered Comments & Non-Default Data

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

Project Characteristics - RPS - 33% goal by 2020, 18.4% accounted for in CalEEMod

Land Use - 37 acre site
603,100 sfConstruction Phase - 6 weeks - grading
2 months - slab, walls, concrete
1 month - roof

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - 847 ADT
Trucks - 274 (0.45 trips/ksf)
38.7 mile trip length
Energy Use -

Water And Wastewater - CalGreen requires 20% reduction in indoor water use (111,573,500 gallons)

Construction Off-road Equipment Mitigation - 61% reduction

Waste Mitigation -

Fleet Mix - Trucks only, mix per TIA

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	55	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	55	61
tblConstructionPhase	NumDays	740.00	178.00
tblConstructionPhase	NumDays	75.00	30.00
tblConstructionPhase	NumDays	55.00	22.00
tblConstructionPhase	PhaseEndDate	3/28/2025	11/30/2022
tblConstructionPhase	PhaseEndDate	5/27/2022	3/25/2022
tblConstructionPhase	PhaseEndDate	6/13/2025	12/30/2022
tblConstructionPhase	PhaseStartDate	5/28/2022	3/28/2022

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

tblConstructionPhase	PhaseStartDate	3/29/2025	12/1/2022
tblFleetMix	HHD	0.03	0.37
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.17
tblFleetMix	LHD2	5.8470e-003	0.21
tblFleetMix	MCY	4.8220e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.6900e-004	0.00
tblFleetMix	MHD	0.02	0.25
tblFleetMix	OBUS	2.1100e-003	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	UBUS	1.7690e-003	0.00
tblGrading	AcresOfGrading	75.00	187.50
tblLandUse	LotAcreage	13.85	37.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	1325.65	1051.61
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	CC_TL	8.40	38.70
tblVehicleTrips	CNW_TL	6.90	38.70
tblVehicleTrips	CW_TL	16.60	38.70
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	0.45
tblVehicleTrips	SU_TR	1.68	0.45

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tblVehicleTrips	WD_TR	1.68	0.45
tblWater	IndoorWaterUseRate	139,466,875.00	111,573,500.00

2.0 Emissions Summary

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

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					
2022	3.7116	38.8976	29.6690	0.0765	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	7,670.928 ₉	7,670.928 ₉	1.9493	0.0000	7,692.095 ₇
Maximum	3.7116	38.8976	29.6690	0.0765	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	7,670.928 ₉	7,670.928 ₉	1.9493	0.0000	7,692.095 ₇

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					
2022	3.7116	38.8976	29.6690	0.0765	7.2470	1.6365	8.8611	3.9263	1.5056	5.4112	0.0000	7,670.928 ₉	7,670.928 ₉	1.9493	0.0000	7,692.095 ₇
Maximum	3.7116	38.8976	29.6690	0.0765	7.2470	1.6365	8.8611	3.9263	1.5056	5.4112	0.0000	7,670.928 ₉	7,670.928 ₉	1.9493	0.0000	7,692.095 ₇

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	60.33	0.00	55.43	60.67	0.00	52.82	0.00	0.00	0.00	0.00	0.00	0.00

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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															
Area	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Energy	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Mobile	1.6330	36.5461	16.7124	0.2452	9.4194	0.1530	9.5723	2.6828	0.1462	2.8290		26,092.1462	26,092.1462	1.0267		26,117.8137
Total	15.1480	36.8755	17.0502	0.2472	9.4194	0.1782	9.5975	2.6828	0.1714	2.8542		26,486.8932	26,486.8932	1.0346	7.2300e-003	26,514.9143

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															
Area	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Energy	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Mobile	1.6330	36.5461	16.7124	0.2452	9.4194	0.1530	9.5723	2.6828	0.1462	2.8290		26,092.1462	26,092.1462	1.0267		26,117.8137
Total	15.1480	36.8755	17.0502	0.2472	9.4194	0.1782	9.5975	2.6828	0.1714	2.8542		26,486.8932	26,486.8932	1.0346	7.2300e-003	26,514.9143

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, 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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/3/2022	2/11/2022	5	30	
2	Grading	Grading	2/12/2022	3/25/2022	5	30	
3	Building Construction	Building Construction	3/28/2022	11/30/2022	5	178	
4	Paving	Paving	12/1/2022	12/30/2022	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

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

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	253.00	99.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

3.2 Site Preparation - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836			3,686.061 ₉	1.1922		3,715.865 ₅
Total	3.1701	33.0835	19.6978	0.0380	18.0663	1.6126	19.6788	9.9307	1.4836	11.4143			3,686.061₉	1.1922		3,715.865₅

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
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
Worker	0.0781	0.0487	0.5647	1.8100e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547			180.1762	4.5400e-003		180.2897
Total	0.0781	0.0487	0.5647	1.8100e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547			180.1762	4.5400e-003		180.2897

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

3.2 Site Preparation - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380	1.6126	1.6126	1.6126	1.4836	1.4836	1.4836	0.0000	3.686.061 ₉	3.686.061 ₉	1.1922		3,715.865 ₅
Total	3.1701	33.0835	19.6978	0.0380	7.0458	1.6126	8.6584	3.8730	1.4836	5.3565	0.0000	3,686.061 ₉	3,686.061 ₉	1.1922		3,715.865 ₅

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0781	0.0487	0.5647	1.8100e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		180.1762	180.1762	4.5400e-003		180.2897
Total	0.0781	0.0487	0.5647	1.8100e-003	0.2012	1.4500e-003	0.2026	0.0534	1.3300e-003	0.0547		180.1762	180.1762	4.5400e-003		180.2897

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3.3 Grading - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					12.6502	0.0000	12.6502	4.0259	0.0000	4.0259			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349	1.5041	1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	12.6502	1.6349	14.2851	4.0259	1.5041	5.5300		6,011.4105	6,011.4105	1.9442		6,060.0158

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0868	0.0542	0.6275	2.0100e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		200.1958	200.1958	5.0400e-003		200.3219
Total	0.0868	0.0542	0.6275	2.0100e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		200.1958	200.1958	5.0400e-003		200.3219

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3.3 Grading - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					4.9336	0.0000	4.9336	1.5701	0.0000	1.5701			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	4.9336	1.6349	6.5685	1.5701	1.5041	3.0742	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	0.0868	0.0542	0.6275	2.0100e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		200.1958	200.1958	5.0400e-003		200.3219
Total	0.0868	0.0542	0.6275	2.0100e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		200.1958	200.1958	5.0400e-003		200.3219

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3.4 Building Construction - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.333 6	2,554.333 6	0.6120		2,569.632 2

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.2747	8.9777	2.4237	0.0241	0.6335	0.0174	0.6509	0.1824	0.0166	0.1990		2,584.1189	2,584.1189	0.1709		2,588.391 9
Worker	1.0974	0.6850	7.9376	0.0254	2.8279	0.0203	2.8483	0.7500	0.0187	0.7687		2,532.476 5	2,532.476 5	0.0638		2,534.071 6
Total	1.3721	9.6627	10.3613	0.0495	3.4614	0.0377	3.4991	0.9323	0.0354	0.9677		5,116.595 3	5,116.595 3	0.2347		5,122.463 4

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3.4 Building Construction - 2022**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															
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333 ₆	2,554.333 ₆	0.6120		2,569.632 ₂
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

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															
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	0.2747	8.9777	2.4237	0.0241	0.6335	0.0174	0.6509	0.1824	0.0166	0.1990		2,584.1189	2,584.1189	0.1709		2,588.391 ₉
Worker	1.0974	0.6850	7.9376	0.0254	2.8279	0.0203	2.8483	0.7500	0.0187	0.7687		2,532.476 ₅	2,532.476 ₅	0.0638		2,534.071 ₆
Total	1.3721	9.6627	10.3613	0.0495	3.4614	0.0377	3.4991	0.9323	0.0354	0.9677		5,116.595₃	5,116.595₃	0.2347		5,122.463₄

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3.5 Paving - 2022**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679	0.5225	0.5225	0.5225		2,207.660 ₃	2,207.660 ₃	0.7140		2,225.510 ₄
Paving	0.0000					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	0.5225		2,207.660₃	2,207.660₃	0.7140		2,225.510₄

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	0.0651	0.0406	0.4706	1.5100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		150.1468	150.1468	3.7800e-003		150.2414
Total	0.0651	0.0406	0.4706	1.5100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		150.1468	150.1468	3.7800e-003		150.2414

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

3.5 Paving - 2022**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 ₃	2,207.660 ₃	0.7140		2,225.510 ₄
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

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.0651	0.0406	0.4706	1.5100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		150.1468	150.1468	3.7800e-003		150.2414
Total	0.0651	0.0406	0.4706	1.5100e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1100e-003	0.0456		150.1468	150.1468	3.7800e-003		150.2414

4.0 Operational Detail - Mobile

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

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	1.6330	36.5461	16.7124	0.2452	9.4194	0.1530	9.5723	2.6828	0.1462	2.8290		26,092.14	26,092.14	1.0267		26,117.813
												62	62			7
Unmitigated	1.6330	36.5461	16.7124	0.2452	9.4194	0.1530	9.5723	2.6828	0.1462	2.8290		26,092.14	26,092.14	1.0267		26,117.813
												62	62			7

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated		
	Weekday	Saturday	Sunday	Annual VMT		Annual VMT		
Unrefrigerated Warehouse-No Rail	271.40	271.40	271.40	3,823,087		3,823,087		
Total	271.40	271.40	271.40	3,823,087		3,823,087		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No Rail	38.70	38.70	38.70	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHH	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.167900	0.208000	0.254600	0.369500	0.000000	0.000000	0.000000	0.000000	0.000000

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

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					
Natural Gas Mitigated	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600
Natural Gas Unmitigated	0.0362	0.3289	0.2762	1.9700e-003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e-003	7.2300e-003	396.9600

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

Land Use	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
	kBTU/yr	lb/day															
Unrefrigerated Warehouse-No Rail	3354.23	0.0362	0.3289	0.2762	1.9700e- 003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e- 003	7.2300e- 003	396.9600
Total		0.0362	0.3289	0.2762	1.9700e- 003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e- 003	7.2300e- 003	396.9600

Mitigated

Land Use	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
	kBTU/yr	lb/day															
Unrefrigerated Warehouse-No Rail	3.35423	0.0362	0.3289	0.2762	1.9700e- 003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e- 003	7.2300e- 003	396.9600
Total		0.0362	0.3289	0.2762	1.9700e- 003		0.0250	0.0250		0.0250	0.0250		394.6150	394.6150	7.5600e- 003	7.2300e- 003	396.9600

6.0 Area Detail**6.1 Mitigation Measures Area**

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Unmitigated	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	1.5317					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9414					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.7000e-003	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Total	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

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	1.5317					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.9414					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.7000e-003	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406
Total	13.4788	5.6000e-004	0.0616	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1320	0.1320	3.5000e-004		0.1406

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

9.0 Operational Offroad

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

9309 Sycamore Hills Distribution Center - Trucks - South Coast Air Basin, Winter

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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APPENDIX 3.2:

EMFAC2017 OUTPUTS

EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: Air Basin

Region: SOUTH COAST

Calendar Year: 2021

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
SOUTH COAST	2021	HHDT	Aggregated	Aggregated	GAS	81.37256335	2494827.715	6179342467	6179342467	581249116.6	2494827.715	3664245910	6.30	HHDT
SOUTH COAST	2021	HHDT	Aggregated	Aggregated	DSL	96726.94954	3602295834	553549.4314	553549.4314		3602295834			
SOUTH COAST	2021	HHDT	Aggregated	Aggregated	NG	4680.49877	59455249.15	27081.75089	27081.75089		59455249.15			
SOUTH COAST	2021	LDA	Aggregated	Aggregated	GAS	6276233.769	85424902825	2843928.69	2843928690	2859933923	85424902825	87638094389	30.64	LDA
SOUTH COAST	2021	LDA	Aggregated	Aggregated	DSL	53709.90247	758277876	16005.23266	16005232.66		758277876			
SOUTH COAST	2021	LDA	Aggregated	Aggregated	ELEC	105013.5494	1454913688	0	0		1454913688			
SOUTH COAST	2021	LDT1	Aggregated	Aggregated	GAS	695145.8966	9044916704	350321.2569	350321256.9	350469841.3	9044916704	9099433845	25.96	LDT1
SOUTH COAST	2021	LDT1	Aggregated	Aggregated	DSL	406.3990307	3303571.415	148.584404	148584.404		3303571.415			
SOUTH COAST	2021	LDT1	Aggregated	Aggregated	ELEC	3691.834147	51213569.06	0	0		51213569.06			
SOUTH COAST	2021	LDT2	Aggregated	Aggregated	GAS	2144804.149	28450958749	1194275.697	1194275697	1199773763	28450958749	28833137416	24.03	LDT2
SOUTH COAST	2021	LDT2	Aggregated	Aggregated	DSL	12472.42499	190292569.6	5498.066026	5498066.026		190292569.6			
SOUTH COAST	2021	LDT2	Aggregated	Aggregated	ELEC	16651.96893	191886097.4	0	0		191886097.4			
SOUTH COAST	2021	LHDT1	Aggregated	Aggregated	GAS	172430.2164	2037473308	195568.4341	195568434.1	264657429	2037473308	3505595337	13.25	LHDT1
SOUTH COAST	2021	LHDT1	Aggregated	Aggregated	DSL	109610.0282	1468122029	69088.99492	69088994.92		1468122029			
SOUTH COAST	2021	LHDT2	Aggregated	Aggregated	GAS	28913.81783	331681112.2	36557.33404	36557334.04	66031661.87	331681112.2	897596739.7	13.59	LHDT2
SOUTH COAST	2021	LHDT2	Aggregated	Aggregated	DSL	43242.23371	565915627.5	29474.32783	29474327.83		565915627.5			
SOUTH COAST	2021	MCY	Aggregated	Aggregated	GAS	279209.3615	679660890.9	18701.69965	18701699.65	18701699.65	679660890.9	679660890.9	36.34	MCY
SOUTH COAST	2021	MDV	Aggregated	Aggregated	GAS	1520877.304	18884146926	974576.4201	974576420.1	990545844.4	18884146926	19394772103	19.58	MDV
SOUTH COAST	2021	MDV	Aggregated	Aggregated	DSL	29603.6659	424072969.6	15969.42426	15969424.26		424072969.6			
SOUTH COAST	2021	MDV	Aggregated	Aggregated	ELEC	7250.17223	86552208.04	0	0		86552208.04			
SOUTH COAST	2021	MH	Aggregated	Aggregated	GAS	34556.28131	107164702.7	21097.82917	21097829.17	24709201.85	107164702.7	144889294.9	5.86	MH
SOUTH COAST	2021	MH	Aggregated	Aggregated	DSL	11829.17149	37724592.19	3611.372674	3611372.674		37724592.19			
SOUTH COAST	2021	MHDT	Aggregated	Aggregated	GAS	24683.60813	433343715.1	86493.33354	86493333.54	313461544.7	433343715.1	2784309734	8.88	MHDT
SOUTH COAST	2021	MHDT	Aggregated	Aggregated	DSL	119075.2856	2350966019	226968.2111	226968211.1		2350966019			
SOUTH COAST	2021	OBUS	Aggregated	Aggregated	GAS	5845.390606	80598037.85	16212.48745	16212487.45	27214203.52	80598037.85	170793098.7	6.28	OBUS
SOUTH COAST	2021	OBUS	Aggregated	Aggregated	DSL	4131.134993	90195060.82	11001.71607	11001716.07		90195060.82			
SOUTH COAST	2021	SBUS	Aggregated	Aggregated	GAS	2414.926741	32078499.43	3548.639209	3548639.209	12223153.16	32078499.43	97307546.97	7.96	SBUS
SOUTH COAST	2021	SBUS	Aggregated	Aggregated	DSL	6314.064027	65229047.54	8674.513954	8674513.954		65229047.54			
SOUTH COAST	2021	UBUS	Aggregated	Aggregated	GAS	943.9678376	29014502.24	6035.145677	6035145.677	53676274.45	29014502.24	217883774.2	4.06	UBUS
SOUTH COAST	2021	UBUS	Aggregated	Aggregated	DSL	14.14141831	483334.0182	80.70235688	80702.35688		483334.0182			
SOUTH COAST	2021	UBUS	Aggregated	Aggregated	ELEC	12.11693886	350840.4964	0	0		350840.4964			
SOUTH COAST	2021	UBUS	Aggregated	Aggregated	NG	5258.325152	188035097.4	47560.42642	47560426.42		188035097.4			

EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: Air Basin

Region: SOUTH COAST

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
SOUTH COAST	2022	HHDT	Aggregated	Aggregated	GAS	77.19580853	7790.40352	1.875688287	1875.688287	1855761.3	7790.40352	12005376.26	6.47	HHDT
SOUTH COAST	2022	HHDT	Aggregated	Aggregated	GAS	98507.93199	11795119.18	1762.986535	1762.986535		11795119.18			
SOUTH COAST	2022	HHDT	Aggregated	Aggregated	NG	4970.65206	202466.6692	90.89907709	90899.07709		202466.6692			
SOUTH COAST	2022	LDA	Aggregated	Aggregated	GAS	6370883.059	246404319.3	7989.700531	7989700.531	8037092.123	246404319.3	253764654.9	31.57	LDA
SOUTH COAST	2022	LDA	Aggregated	Aggregated	DSL	57442.99931	2304136.238	47.39159146	47391.59146		2304136.238			
SOUTH COAST	2022	LDA	Aggregated	Aggregated	ELEC	124563.2409	5056199.364	0	0		5056199.364			
SOUTH COAST	2022	LDT1	Aggregated	Aggregated	GAS	716397.3518	26563674.69	1003.18171	1003181.71	1003572.883	26563674.69	26788932.07	26.69	LDT1
SOUTH COAST	2022	LDT1	Aggregated	Aggregated	DSL	378.1209221	8809.098622	0.391172549	391.1725485		8809.098622			
SOUTH COAST	2022	LDT1	Aggregated	Aggregated	ELEC	5221.444065	216448.2738	0	0		216448.2738			
SOUTH COAST	2022	LDT2	Aggregated	Aggregated	GAS	2182001.595	82381240.23	3339.886942	3339886.942	3356537.651	82381240.23	83689697.63	24.93	LDT2
SOUTH COAST	2022	LDT2	Aggregated	Aggregated	DSL	13854.2049	592642.9638	16.65070839	16650.70839		592642.9638			
SOUTH COAST	2022	LDT2	Aggregated	Aggregated	ELEC	22002.57874	715814.4362	0	0		715814.4362			
SOUTH COAST	2022	LHDT1	Aggregated	Aggregated	GAS	171358.6393	6138928.512	583228.1345	583228.1345	800341.5364	6138928.512	10820375.97	13.52	LHDT1
SOUTH COAST	2022	LHDT1	Aggregated	Aggregated	DSL	115788.8697	4681447.455	217.1134019	217113.4019		4681447.455			
SOUTH COAST	2022	LHDT2	Aggregated	Aggregated	GAS	29049.28992	1009215.767	110.1260053	110126.0053	203012.615	1009215.767	2818408.059	13.88	LHDT2
SOUTH COAST	2022	LHDT2	Aggregated	Aggregated	DSL	45909.32093	1809192.293	92.8866097	92886.6097		1809192.293			
SOUTH COAST	2022	MCY	Aggregated	Aggregated	GAS	288756.3349	1994249.265	54.92216124	54922.16124	54922.16124	1994249.265	1994249.265	36.31	MCY
SOUTH COAST	2022	MDV	Aggregated	Aggregated	GAS	1530646.036	54105469.86	2704.447563	2704447.563	2752250.891	54105469.86	55792816.79	20.27	MDV
SOUTH COAST	2022	MDV	Aggregated	Aggregated	DSL	32417.6069	1305872.927	47.80332863	47803.32863		1305872.927			
SOUTH COAST	2022	MDV	Aggregated	Aggregated	ELEC	11342.44576	381474.0008	0	0		381474.0008			
SOUTH COAST	2022	MH	Aggregated	Aggregated	GAS	34090.75617	324253.0827	62.96118679	62961.18679	74081.4227	324253.0827	441741.3507	5.96	MH
SOUTH COAST	2022	MH	Aggregated	Aggregated	DSL	12198.83938	117488.268	11.12023591	11120.23591		117488.268			
SOUTH COAST	2022	MHDT	Aggregated	Aggregated	GAS	24783.33529	1316472.619	259.391887	259391.887	979552.16	1316472.619	9032506.745	9.22	MHDT
SOUTH COAST	2022	MHDT	Aggregated	Aggregated	DSL	119795.9837	7716034.126	720.1602731	720160.2731		7716034.126			
SOUTH COAST	2022	OBUS	Aggregated	Aggregated	GAS	5832.050706	240794.901	47.77312679	47773.12679	85232.30668	240794.901	557199.216	6.54	OBUS
SOUTH COAST	2022	OBUS	Aggregated	Aggregated	DSL	4149.674133	316404.315	37.45917989	37459.17989		316404.315			
SOUTH COAST	2022	SBUS	Aggregated	Aggregated	GAS	2563.072605	102707.6059	11.26572543	11265.72543	37683.19883	102707.6059	303493.9216	8.05	SBUS
SOUTH COAST	2022	SBUS	Aggregated	Aggregated	DSL	6354.464943	200786.3158	26.4174734	26417.4734		200786.3158			
SOUTH COAST	2022	UBUS	Aggregated	Aggregated	GAS	952.146028	89255.99818	18.40085629	18400.85629	165778.6625	89255.99818	670265.9792	4.04	UBUS
SOUTH COAST	2022	UBUS	Aggregated	Aggregated	DSL	14.14141831	1478.085683	0.246796198	246.7961984		1478.085683			
SOUTH COAST	2022	UBUS	Aggregated	Aggregated	ELEC	12.11693886	1072.906717	0	0		1072.906717			
SOUTH COAST	2022	UBUS	Aggregated	Aggregated	NG	5289.69063	578458.9886	147.13101	147131.01		578458.9886			

EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: Air Basin

Region: SOUTH COAST

Calendar Year: 2023

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
SOUTH COAST	2023	HHDT	Aggregated	Aggregated	GAS	74.36697766	8047.234514	1.889822802	1889.822802	1793165.877	8047.234514	12265396.48	6.84	HHDT
SOUTH COAST	2023	HHDT	Aggregated	Aggregated	GAS	99861.99512	12043323.35	1696.529801	1696529.801		12043323.35			
SOUTH COAST	2023	HHDT	Aggregated	Aggregated	NG	5254.204295	214025.8973	94.74625324	94746.25324		214025.8973			
SOUTH COAST	2023	LDA	Aggregated	Aggregated	GAS	6459700.679	246807537.8	7786.050943	7786050.943	7834375.926	246807537.8	255304970.1	32.59	LDA
SOUTH COAST	2023	LDA	Aggregated	Aggregated	DSL	60890.56967	2412432.063	48.32498247	48324.98247		2412432.063			
SOUTH COAST	2023	LDA	Aggregated	Aggregated	ELEC	147063.7622	6085000.242	0	0		6085000.242			
SOUTH COAST	2023	LDT1	Aggregated	Aggregated	GAS	737358.378	27059295.05	995.7584858	995758.4858	996116.9248	27059295.05	27363664.87	27.47	LDT1
SOUTH COAST	2023	LDT1	Aggregated	Aggregated	DSL	352.3731972	8196.099133	0.358438996	358.4389963		8196.099133			
SOUTH COAST	2023	LDT1	Aggregated	Aggregated	ELEC	6955.301731	296173.724	0	0		296173.724			
SOUTH COAST	2023	LDT2	Aggregated	Aggregated	GAS	2219228.893	82875046.15	3244.205846	3244205.846	3261517.833	82875046.15	84401937.27	25.88	LDT2
SOUTH COAST	2023	LDT2	Aggregated	Aggregated	DSL	15172.53672	633608.0513	17.3119865	17311.9865		633608.0513			
SOUTH COAST	2023	LDT2	Aggregated	Aggregated	ELEC	28041.70696	893283.0672	0	0		893283.0672			
SOUTH COAST	2023	LHDT1	Aggregated	Aggregated	GAS	170372.4965	6057759.011	568765.3525	568765.3525	790557.617	6057759.011	10913696.29	13.81	LHDT1
SOUTH COAST	2023	LHDT1	Aggregated	Aggregated	DSL	121835.7828	4855937.278	221.7922645	221792.2645		4855937.278			
SOUTH COAST	2023	LHDT2	Aggregated	Aggregated	GAS	29153.36543	1003759.333	108.2867448	108286.7448	203441.0726	1003759.333	2884983.381	14.18	LHDT2
SOUTH COAST	2023	LHDT2	Aggregated	Aggregated	DSL	48525.62926	1881224.048	95.1543278	95154.3278		1881224.048			
SOUTH COAST	2023	MCY	Aggregated	Aggregated	GAS	297600.1806	2024753.658	55.80486473	55804.86473	55804.86473	2024753.658	2024753.658	36.28	MCY
SOUTH COAST	2023	MDV	Aggregated	Aggregated	GAS	1540538.654	53902320.53	2607.445148	2607445.148	2656692.288	53902320.53	55808966.79	21.01	MDV
SOUTH COAST	2023	MDV	Aggregated	Aggregated	DSL	35106.86699	1383747.201	49.24713973	49247.13973		1383747.201			
SOUTH COAST	2023	MDV	Aggregated	Aggregated	ELEC	15923.81292	522899.0503	0	0		522899.0503			
SOUTH COAST	2023	MH	Aggregated	Aggregated	GAS	33691.86881	321144.1737	61.56644375	61566.44375	72761.24262	321144.1737	440653.2336	6.06	MH
SOUTH COAST	2023	MH	Aggregated	Aggregated	DSL	12560.08147	119509.0599	11.19479887	11194.79887		119509.0599			
SOUTH COAST	2023	MHDT	Aggregated	Aggregated	GAS	24928.02135	1310043.213	254.9794108	254979.4108	960096.3727	1310043.213	9204138.215	9.59	MHDT
SOUTH COAST	2023	MHDT	Aggregated	Aggregated	DSL	118680.9927	7894095.002	705.1169619	705116.9619		7894095.002			
SOUTH COAST	2023	OBUS	Aggregated	Aggregated	GAS	5826.415387	235991.1907	46.21415569	46214.15569	83380.32776	235991.1907	559899.8926	6.72	OBUS
SOUTH COAST	2023	OBUS	Aggregated	Aggregated	DSL	4158.730714	323908.7018	37.16617208	37166.17208		323908.7018			
SOUTH COAST	2023	SBUS	Aggregated	Aggregated	GAS	2711.854801	107297.3058	11.679437	11679.437	37975.60014	107297.3058	309350.8102	8.15	SBUS
SOUTH COAST	2023	SBUS	Aggregated	Aggregated	DSL	6393.273998	202053.5043	26.29616314	26296.16314		202053.5043			
SOUTH COAST	2023	UBUS	Aggregated	Aggregated	GAS	957.7686184	89782.63172	17.62416327	17624.16327	165875.0232	89782.63172	674220.7223	4.06	UBUS
SOUTH COAST	2023	UBUS	Aggregated	Aggregated	DSL	13.00046095	1416.621572	0.239500509	239.5005093		1416.621572			
SOUTH COAST	2023	UBUS	Aggregated	Aggregated	ELEC	12.11693886	1072.906717	0	0		1072.906717			
SOUTH COAST	2023	UBUS	Aggregated	Aggregated	NG	5322.197065	581948.5623	148.0113594	148011.3594		581948.5623			

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