



Vineyard Avenue Warehouse

ENERGY ANALYSIS

SAN BERNARDINO COUNTY

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LIST OF ABBREVIATED TERMS

%	Percent
(1)	Reference
AQIA	<i>Vineyard Avenue Warehouse Air Quality Impact Analysis</i>
BACM	Best Available Control Measures
BTU	British Thermal Units
CalEEMod	California Emissions Estimator Model
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
County	San Bernardino County
CPEP	Clean Power and Electrification Pathway
CPUC	California Public Utilities Commission
County	San Bernardino County
DMV	Department of Motor Vehicles
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EMFAC	EMissions FACtor
FERC	Federal Energy Regulatory Commission
GHG	Greenhouse Gas
GWh	Gigawatt Hour
HHDT	Heavy-Heavy Duty Trucks
hp-hr-gal	Horsepower Hours Per Gallon
IEPR	Integrated Energy Policy Report
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
kBTU	Thousand-British Thermal Units
kWh	Kilowatt Hour
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHDT1/LHDT2	Light-Heavy Duty Trucks
MARB/IPA	March Air Reserve Base/Inland Port Airport
MDV	Medium Duty Trucks
MHDT	Medium-Heavy Duty Trucks

MMcfd	Million Cubic Feet Per Day
mpg	Miles Per Gallon
MPO	Metropolitan Planning Organization
PG&E	Pacific Gas and Electric
Project	Vineyard Avenue Warehouse
PV	Photovoltaic
SCAB	South Coast Air Basin
SCE	Southern California Edison
SDAB	San Diego Air Basin
sf	Square Feet
SoCalGas	Southern California Gas
TEA-21	Transportation Equity Act for the 21 st Century
U.S.	United States
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Vineyard Avenue Warehouse Energy Analysis* is summarized below based on the significance criteria in Section 5 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Statute and Guidelines (*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: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	5.0	<i>Less Than Significant</i>	<i>n/a</i>
Energy Impact #2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	5.0	<i>Less Than Significant</i>	<i>n/a</i>

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the federal and state agencies that regulate energy use and consumption through various means and programs. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of energy usage include:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
- The Transportation Equity Act for the 21st Century (TEA-21)
- Integrated Energy Policy Report (IEPR)
- State of California Energy Plan
- California Code Title 24, Part 6, Energy Efficiency Standards
- California Code Title 24, Part 11, California Green Building Standards Code (CALGreen)
- AB 1493 Pavley Regulations and Fuel Efficiency Standards
- California's Renewable Portfolio Standard (RPS)
- Clean Energy and Pollution Reduction Act of 2015 (SB 350)

Consistency with the above regulations is discussed in detail in section 5 of this report.

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1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed Vineyard Avenue Warehouse Project (Project). The purpose of this report is to ensure that energy implication is considered by the San Bernardino County (Lead Agency), as the lead agency under the California Environmental Quality Act (CEQA), 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 SITE LOCATION

The Project site is located west of Maple Avenue, south of Bohnert Avenue, north of Casmalia Street and east of Locust Avenue (Assessor Parcel Numbers [APNs] 1133-201-04, 1133-221-02, 1133-221-06, and 1133-221-07) in unincorporated San Bernardino County and within the City of Rialto Sphere of Influence (SOI), as shown on Exhibit 1-A.

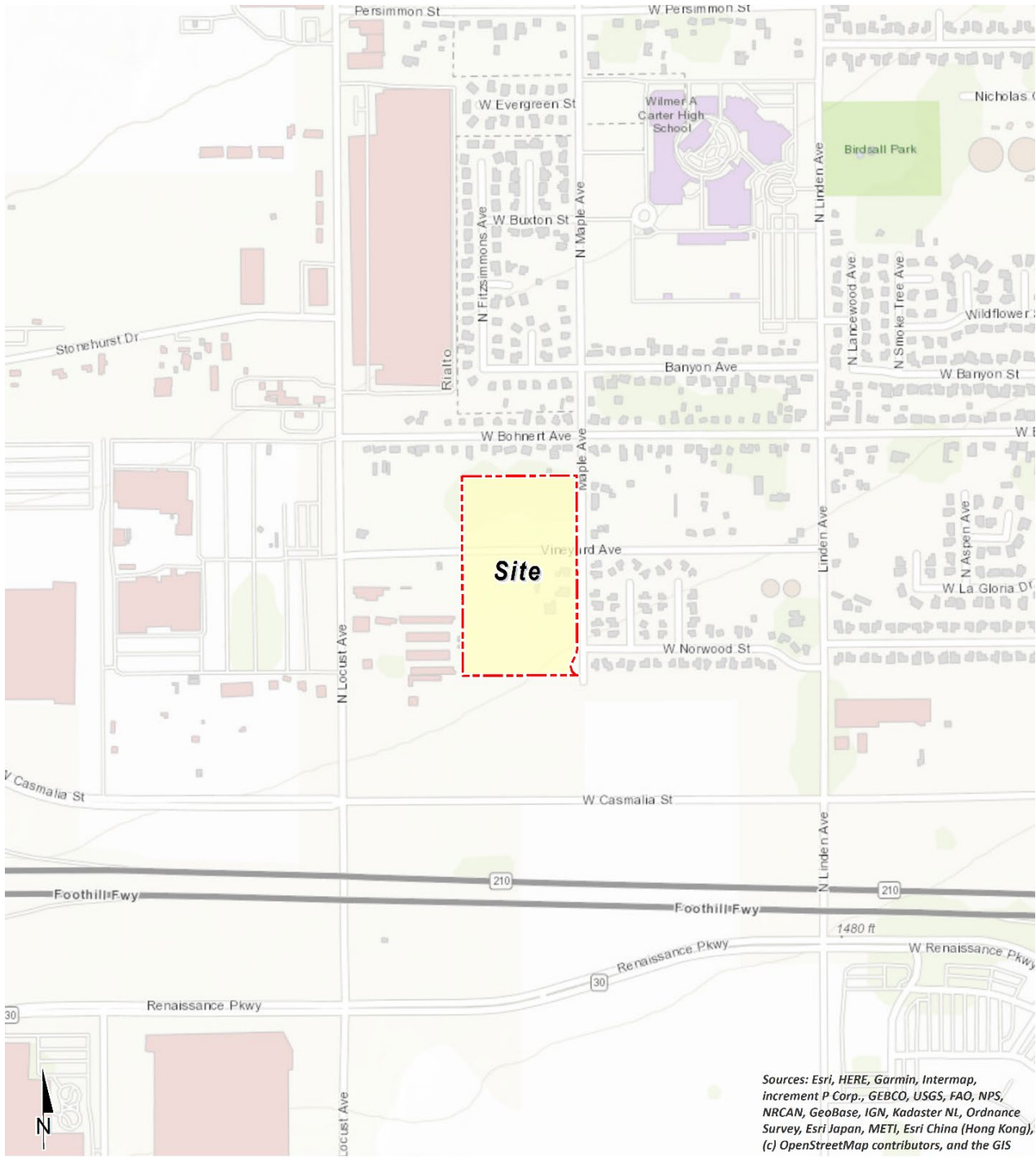
The Project is currently within an unincorporated area of San Bernardino County (County) and within the City of Rialto Sphere of Influence (SOI). The County's land use designation for the Project site is Very Low Density Residential (VLDR). The County's zoning designation for the Project site is Single Residential (RS-1). The proposed Project would include a General Plan Amendment and Zone Change to amend the San Bernardino County land use and zoning from Residential to Industrial.

1.2 PROJECT DESCRIPTION

The Project includes construction and operation of approximately 311,315 square foot (sf) warehouse building on 15.88 acres, as shown on Exhibit 1-B¹. The Project would be developed in a single phase with construction expected to begin in May 2025 and last through September 2026 over a duration of 16 months, with an anticipated Opening Year of 2026.

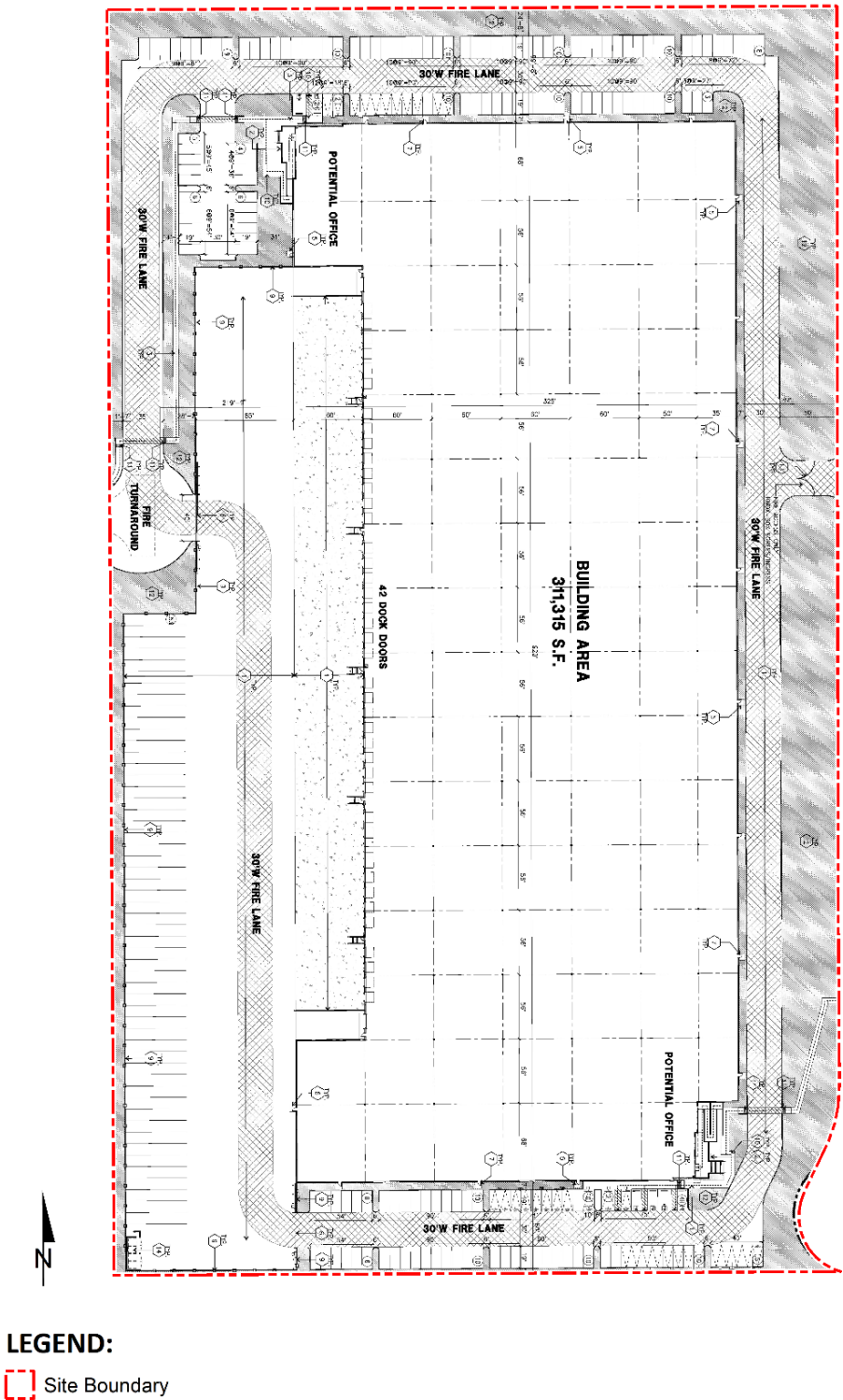
¹ It should be noted that this analysis is based on a previous site plan, which analyzed 311,432 sf of warehouse uses. As such, the emissions and impacts analyzed in this report are slightly overstated compared to the current Project square footage.

EXHIBIT 1-A: LOCATION MAP



LEGEND:
[Red dashed box] Site Boundary

EXHIBIT 1-B: SITE PLAN



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2 EXISTING CONDITIONS

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

2.1 OVERVIEW

The most recent data for California's estimated total energy consumption and natural gas consumption is from 2022 and 2023, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates and includes (2):

- As of 2022, approximately 6,882 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2022, approximately 628 million barrels of petroleum
- As of 2023, approximately 2,085 billion cubic feet of natural gas
- As of 2023, approximately 1,227 thousand short tons of coal

According to the EIA, in 2022 the U.S. petroleum consumption comprised about 90% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels (3). In 2023, about 253,289 million gallons (or about 6.031 million barrels) of finished petroleum products were consumed in the U.S., an average of about 694 million gallons per day (or about 16.5 million barrels per day) (4). In 2021, California consumed approximately 12,157 million gallons in motor gasoline (33.31 million per day) and approximately 3,541 million gallons of diesel fuel (9.7 million per day) (5).

The most recent data provided by the EIA for energy use in California is reported from 2022 which shows approximate energy usage by each of the following sectors:

- 42.6% for transportation uses
- 22.5% for industrial uses
- 17.6% for residential uses
- 17.4% for commercial uses (6)

According to the EIA, California used approximately 239,480 million kilowatt hours (kWh) of electricity in 2023 (7). By sector in 2023, residential uses utilized 34.6% of the state's electricity, followed by 47.2% for commercial uses, 18.0% for industrial uses, and 0.3% for transportation. Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building (8).

According to the EIA, California used approximately 21,036 million therms of natural gas in 2023 (9). In 2023 (the most recent year for which data is available), by sector, industrial uses utilized 31.6% of the state's natural gas, followed by 31.3% used as fuel in the electric power sector, 22.8% from residential, 12.7% from commercial, 1.5% from transportation uses and the remaining 3% was utilized for the operations, processing and production of natural gas itself (9). While the supply of natural gas in the United States and production in the lower 48 states has

increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas (9).

In 2023, total system electric generation for California was 281,140 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 215,623 GWh which accounted for approximately 76% of the electricity it uses; the rest was imported from the Pacific Northwest (6%) and the U.S. Southwest (18%) (10). Natural gas is the main source for electricity generation at 43.68% of the total in-state electric generation system power as shown in Table 2-1.

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 (11):

- In 2023, California was the seventh-largest producer of crude oil among the 50 states, and the state ranked third in crude oil refining capacity.
- California is the largest consumer of jet fuel and second-largest consumer of motor gasoline among the 50 states.
- California is the second-largest total energy consumer among the states, after Texas, but its per capita energy consumption is the fourth-lowest in the nation.
- In 2023, renewable resources, including hydroelectric power and small-scale solar power, supplied 54% of California's in-state electricity generation. Natural gas fueled another 39% and nuclear power provided almost all the rest.
- In 2023, California was the fourth-largest electricity producer in the nation. It is also the nation's third-largest electricity consumer and imports more electricity than any other state.

As indicated below, California is one of the nation's leading energy-producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the 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.

TABLE 2-1: TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2023)

Fuel Type	California In-State Generation (GWh)	% of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Total California Energy Mix (GWh)	Total California Power Mix
Coal	257	0.12%	163	4,561	4,724	4,981	1.77%
Natural Gas	94,192	43.68%	52	8,530	8,582	102,774	36.56%
Oil	36	0.02%	0	0	0	36	0.01%
Other (Waste Heat/Petroleum Coke)	206	0.10%	0	0	0	206	0.07%
Unspecified	0	0.00%	100	10,273	10,373	10,373	3.69%
Total Thermal and Unspecified	94,690	43.91%	316	23,363	23,679	118,370	42.10%
Nuclear	17,714	8.22%	196	8,361	8,558	26,272	9.34%
Large Hydro	27,066	12.55%	4,712	1,109	5,821	32,886	11.70%
Biomass	5,037	2.34%	753	-	753	5,790	2.06%
Geothermal	10,999	5.10%	221	2,347	2,569	13,567	4.83%
Small Hydro	4,853	2.25%	133	2	135	4,988	1.77%
Solar	41,344	19.17%	417	6,108	6,525	47,869	17.03%
Wind	13,920	6.46%	9,177	8,302	17,479	31,399	11.17%
Total Non-GHG and Renewable Resources	120,932	56.09%	15,609	26,229	41,838	162,771	57.90%
SYSTEM TOTALS	215,623	100.00%	15,925	49,593	65,518	281,140	100.00%

Source: California Energy Commission's 2023 Total System Electric Generation

2.2 ELECTRICITY

The usage associated with electricity use were calculated using the California Emissions Estimator Model (CalEEMod) Version 2022.1.1.29. 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 revealed the extent to which the South Coast 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. Similarly, the subsequent 2023 IEPR provides information and policy recommendations on advancing a clean, reliable, and affordable energy system (12).

Electricity is currently provided to the Project site by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2023 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers (13).

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 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 enough 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 (14).

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, utilities 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, SCE's specific proportional shares of electricity sources in 2023. As indicated in Table 2-2, the 2023 SCE Power Mix has renewable energy at 36.9% of the overall energy resources. Geothermal resources are at 4.8%, wind power is at 11.2%, large hydroelectric sources are at 11.7%, solar energy is at 17.0%, and coal is at 1.8% (15).

TABLE 2-2: SCE 2023 POWER CONTENT MIX

Energy Resources	2023 SCE Power Mix
Eligible Renewable	36.9%
Biomass & Waste	2.1%
Geothermal	4.8%
Eligible Hydroelectric	1.8%
Solar	17.0%
Wind	11.2%
Coal	1.8%
Large Hydroelectric	11.7%
Natural Gas	36.6%
Nuclear	9.3%
Other	0.1%
Unspecified Sources of power*	3.7%
Total	100%

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

2.3 NATURAL GAS

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations 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.

California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.

The overwhelming majority of natural gas utility customers in California are residential and small commercial customers, referred to as "core" customers. Larger volume gas

customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.

A significant amount of gas (about 19%, or 1131 MMcf, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e., they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area). Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

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 gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. 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, and authorizes rates for that service, the California Public Utilities Commission may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.

Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production.

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. 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 and daily natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements.

Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the Commission has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.

The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' web sites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.

Another option resulting from the restructuring process occurred in 1993, when the Commission removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The Commission also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the Commission assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.

In a 1997 decision, the Commission adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the Commission. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent Commission decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).

In a 2006 decision, the Commission adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the

backbone transmission system (BTS) framework. As under the PG&E backbone transmission system, SoCalGas backbone transmission costs are unbundled from noncore transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas system. A certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.

Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.

In order properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California." (16)

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 CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

California accounts for less than 1% of total U.S. natural gas reserves and production. As with crude oil, California's natural gas production has experienced a gradual decline since 1985. In 2023, about 32% of the natural gas delivered to consumers went to the State's industrial sector, and about 31% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the State's utility-scale electricity generation in 2023. The residential sector, where three-fifths of California households use natural gas for home heating, accounted for 23% of natural gas deliveries. The commercial sector received 13% of the deliveries to end users and the transportation sector consumed the remaining 1% (17).

2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. The Department of Motor Vehicles (DMV) identified 36.2 million registered vehicles in California (6), and those vehicles consume an estimated 17.2 billion gallons of fuel each year². 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 396,616 lane miles, more than 26.6 million passenger vehicles and light trucks, and almost 9.0 million medium- and heavy-duty vehicles (6). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. California is the second-largest consumer of petroleum products, after Texas, and accounts for 8% of the nation's total consumption. The State is the largest U.S. consumer of motor gasoline and jet fuel, and 83% of the petroleum consumed in California is used in the transportation sector (17).

² Fuel consumptions estimated utilizing information from EMFAC2021.

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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 (EPA) 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. Relevant federal and state energy-related laws and plans are summarized below.

3.1 FEDERAL REGULATIONS

3.1.1 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.

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

The 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

3.2.1 INTEGRATED ENERGY POLICY REPORT (IEPR)

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 § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2023 IEPR was adopted February 2024, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2023 IEPR introduces a new

framework for embedding equity and environmental justice at the CEC and the California Energy Planning Library which allows for easier access to energy data and analytics for a wide range of users. Additionally, energy reliability, western electricity integration, gasoline cost factors and price spikes, the role of hydrogen in California's clean energy future, fossil gas transition and distributed energy resources are topics discussed within the 2023 IEPR (18).

3.2.2 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 several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

3.2.3 CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

California Code of Regulations (CCR) 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 greenhouse gas (GHG) emissions. The 2022 version of Title 24 was adopted by the CEC and became effective on January 1, 2023³. The 2022 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting standards for nonresidential buildings.

The CEC anticipates that the 2022 energy code will provide \$1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (19). The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items (20):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the

³ The 2022 California Green Building Standards Code became effective on January 1, 2023, however; it has since been amended on July 1, 2024 with the Intervening Code Cycle Update which is reflected in this report. Additionally, it should be noted that CALGreen is currently being updated, with the most recent draft update consisting of the 2025 California Green Building Code Standards that will be effective on January 1, 2025. As construction of the Project is anticipated to be completed in 2026, it is presumed that the Project's would be required to comply with the Title 24 standards in place at that time of construction.

visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).

- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.1 (5.106.5.3). Alternatively, the power allocation method may be used as an alternative to the requirements mentioned in Section 5.106.5.1, and associated Table 5.106.5.3. Use of Table 5.106.5.3.6 to can be used to determine the total power in kVA required based on the total number of actual parking spaces. Additionally, Table 5.106.5.5.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty EV supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, upright and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section
- 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
 - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).
 - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
 - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
 - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWEL0), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is projected to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

3.2.4 AB 1493 PAVLEY REGULATIONS AND FUEL EFFICIENCY STANDARDS

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption.

3.2.5 CALIFORNIA'S RENEWABLE PORTFOLIO STANDARD (RPS)

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 33% of total retail sales by 2020 (21).

3.2.6 CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350)

In October 2015, the legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy

efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 45% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the CPUC, the CEC, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

3.2.7 100 PERCENT CLEAN ENERGY ACT OF 2018 (SB 100)

In September 2018, the legislature approved, and the Governor signed SB 100, which builds on the targets established in SB 1078 and SB 350. Most notably, SB 100 sets a goal of powering all retail electricity sold in California with renewable and zero-carbon resources. Additionally, SB 100 updates the interim renewables target from 50% to 60% by 2030.

3.2.8 EXECUTIVE ORDER N-79-20 AND ADVANCED CLEAN CARS II

On August 25, 2022, CARB approved the Advanced Clean Cars II rule, which codifies the goals set out in Executive Order N-79-20 and establishes a year-by-year roadmap such that by 2035, 100% of new cars and light trucks sold in California will be zero-emission vehicles. Under this regulation, automakers are required to accelerate deliveries of zero-emission light-duty vehicles, beginning with model year 2026. CARB estimates that between 2026 and 2040, the regulation would reduce GHG emissions by a cumulative 395 million metric tons, equivalent to reducing petroleum use by 915 million barrels.

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4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

4.1 EVALUATION CRITERIA

Per Appendix F of the *State CEQA Guidelines* (22), 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.

In compliance with Appendix G of the *State CEQA Guidelines* (23), this report analyzes the project's anticipated energy use during construction and operations 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.

4.2 METHODOLOGY

Information from the CalEEMod Version 2022.1.1.29 outputs for the *Vineyard Avenue Warehouse Air Quality Impact Analysis* (AQIA) (24) was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands. Outputs from the annual model runs are provided in Appendices 4.1 and 4.2.

4.2.1 CALEEMOD

In May 2023, the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including the SCAQMD, released the latest version of CalEEMod, version 2022.1.1.29. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources as well as energy usage (25). Accordingly, the latest version of CalEEMod has been used to determine the proposed Project's anticipated transportation and facility energy demands. Outputs from the annual model runs are provided in Appendices 4.1 and 4.2.

4.2.2 EMISSION FACTORS MODEL

On May 2, 2022, the EPA approved the 2021 version of the EMISSIONS FACTOR model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2021 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 (26). This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2021 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 the analysis, the 2025 and 2026 analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Output from the EMFAC2021 model runs are provided in Appendix 4.3.

CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in May 2025 and would last through September 2026 (24). The construction schedule utilized in the analysis, shown in Table 4-1, represents a “worst-case” analysis scenario and is based on data provided by the Project Applicant. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (27).

CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 4-2 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code. The equipment list is generally based on CalEEMod default parameters and confirmed with the Project Applicant.

TABLE 4-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Demolition	05/02/2025	05/29/2025	20
Site Preparation	05/31/2025	06/13/2025	10
Grading	06/14/2025	07/26/2025	30
Building Construction	07/27/2025	09/20/2026	300
Paving	08/24/2026	09/20/2026	20
Architectural Coating	07/27/2026	09/20/2026	40

Source: Appendix 4.1

TABLE 4-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Amount	Hours Per Day
Demolition	Rubber Tired Dozers	2	8
	Excavators	3	8
	Concrete/Industrial Saws	1	8
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Graders	1	8
	Excavators	2	8

Construction Activity	Equipment	Amount	Hours Per Day
	Scrapers	2	8
	Rubber Tired Dozers	1	8
	Crawler Tractors	2	8
Building Construction	Forklifts	3	8
	Generator Sets	1	8
	Cranes	1	8
	Welders	1	8
	Tractors/Loaders/Backhoes	3	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

4.3 CONSTRUCTION ENERGY DEMANDS

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.

4.3.1 CONSTRUCTION POWER COST

The total Project construction power costs is the summation of the products of the area (sf) by the construction duration and the typical power cost.

PROJECT CONSTRUCTION POWER COST

The *2025 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of \$2.85, which was used to calculate the Project's total construction power cost (28).

As shown on Table 4-3, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately \$26,298.07.

TABLE 4-3: CONSTRUCTION POWER COST

Land Use	Power Cost (per 1,000 SF)	Size (1,000 SF)	Construction Duration (months)	Project Construction Power Cost
Warehouse	\$2.85	311.432	16	\$14,201.30
Parking Lot	\$2.85	62.726	16	\$2,860.31
Other Asphalt Surfaces	\$2.85	202.554	16	\$9,236.46
CONSTRUCTION POWER COST				\$26,298.07

4.3.2 CONSTRUCTION ELECTRICITY USAGE

The total Project construction electricity usage is the summation of the products of the power cost (estimated in Table 4-3) by the utility provider cost per kilowatt hour (kWh) of electricity.

PROJECT CONSTRUCTION ELECTRICITY USAGE

The SCE's general service rate schedule was used to determine the Project's electrical usage. As of March 1, 2025, SCE's general service rate is \$0.17 per kilowatt hours (kWh) of electricity for general services (29). As shown on Table 4-4, the total electricity usage from on-site Project construction related activities is estimated to be approximately 156,928 kWh.

TABLE 4-4: CONSTRUCTION ELECTRICITY USAGE

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
Warehouse	\$0.17	84,743
Parking Lot	\$0.17	17,068
Other Asphalt Surfaces	\$0.17	55,117
CONSTRUCTION ELECTRICITY USAGE		156,928

4.3.3 CONSTRUCTION EQUIPMENT FUEL ESTIMATES

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction.

PROJECT CONSTRUCTION EQUIPMENT FUEL CONSUMPTION

Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4-5. 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 (30). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is consistent with industry standards. Diesel fuel would be supplied by existing industrial fuel providers serving the Project area and region⁴. As presented in Table 4-5, Project construction activities would consume an estimated 52,941 gallons of diesel fuel. 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 Based on Appendix A of the CalEEMod User's Guide, Construction consists of several types of off-road equipment. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel.

TABLE 4-5: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Activity/Duration	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Demolition	20	Rubber Tired Dozers	367	2	8	0.4	2,349	2,539
		Excavators	36	3	8	0.38	328	355
		Concrete/Industrial Saws	33	1	8	0.73	193	208
Site Preparation	10	Rubber Tired Dozers	367	3	8	0.4	3,523	1,904
		Crawler Tractors	87	4	8	0.43	1,197	647
Grading	20	Graders	148	1	8	0.41	485	787
		Excavators	36	2	8	0.38	219	355
		Scrapers	423	2	8	0.48	3,249	5,268
		Rubber Tired Dozers	367	1	8	0.4	1,174	1,904
		Crawler Tractors	87	2	8	0.43	599	971
Building Construction	230	Forklifts	82	3	8	0.2	394	6,383
		Generator Sets	14	1	8	0.74	83	1,344
		Cranes	367	1	8	0.29	851	13,807
		Welders	46	1	8	0.45	166	2,685
		Tractors/Loaders/Backhoes	84	3	8	0.37	746	12,096
Paving	20	Pavers	81	2	8	0.42	544	588
		Paving Equipment	89	2	8	0.36	513	554
		Rollers	36	2	8	0.38	219	237
Architectural Coating	20	Air Compressors	37	1	8	0.48	142	307
TOTAL CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)								52,941

4.3.3 CONSTRUCTION TRIPS AND VMT

Construction generates on-road vehicle emissions from vehicle usage for workers, hauling, and vendors commuting to and from the site. The number of workers, hauling, and vendor trips are presented below in Table 4-6. It should be noted that for Vendor Trips, specifically, CalEEMod only assigns Vendor Trips to the Building Construction phase. Vendor trips are more likely to occur during all phases of construction. As such, the analysis has been revised so that the default trips are ratioed between Demolition, Site Preparation, Grading, and Building Construction activities based on the number of days. It should be noted that because Paving and Architectural Coating activities overlap with Building Construction, the analysis assumes that the vendor trips assigned to Building Construction cover Paving and Architectural Coating as well.

TABLE 4-6: CONSTRUCTION TRIPS AND VMT

Phase Name	Worker Trips / Day	Vendor Trips / Day	Hauling Trips / Day	Worker Trip Length	Vendor Trip Length	Hauling Trip Length
Demolition	15	3	6	18.5	10.2	20
Site Preparation	18	12	0	18.5	10.2	20
Grading	20	4	150	18.5	10.2	20
Building Construction	131	34	0	18.5	10.2	20
Paving	15	0	0	18.5	10.2	20
Architectural Coating	26	0	0	18.5	10.2	20

4.3.4 CONSTRUCTION WORKER FUEL ESTIMATES

With respect to estimated VMT for the Project, the construction worker trips would generate an estimated 779,035 VMT during construction (24). Based on CalEEMod methodology, it is assumed that 50% of all worker trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1⁵), and 25% are from light-duty-trucks (LDT2⁶). Data regarding Project related construction worker trips were based on CalEEMod defaults utilized within the AQIA.

Vehicle fuel efficiencies for LDA, LDT1, and LDT2 were estimated using information generated within the 2021 version of the EMFAC developed by CARB. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, and 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 (26). EMFAC2021 was run for the LDA, LDT1, and LDT2 vehicle class within the San Bernardino (SC) sub-area for the 2025 and 2026 calendar years. Data from EMFAC2021 is shown in Appendix 4.3.

⁵ Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

⁶ Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

Table 4-7 provides an estimated annual fuel consumption resulting from Project construction worker trips. Based on Table 4-7, it is estimated that 27,008 gallons of gasoline fuel will be consumed related to construction worker trips during full construction of the Project.

It should be noted that 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 4-7: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES

Year	Construction Activity	Duration (Days)	Worker (Trips/Day)	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2025	LDA						
	Demolition	20	8	18.5	2,960	32.57	91
	Site Preparation	10	9	18.5	1,665	32.57	51
	Grading	30	10	18.5	5,550	32.57	170
	Building Construction	113	66	18.5	137,973	32.57	4,237
	LDT1						
	Demolition	20	4	18.5	1,480	25.11	59
	Site Preparation	10	5	18.5	925	25.11	37
	Grading	30	5	18.5	2,775	25.11	110
	Building Construction	113	33	18.5	68,987	25.11	2,747
	LDT2						
	Demolition	20	4	18.5	1,480	25.24	59
	Site Preparation	10	5	18.5	925	25.24	37
	Grading	30	5	18.5	2,775	25.24	110
	Building Construction	113	33	18.5	68,987	25.24	2,733
2026	LDA						
	Building Construction	187	66	18.5	228,327	33.47	6,821
	Paving	20	8	18.5	2,960	33.47	88
	Architectural Coating	40	13	18.5	9,620	33.47	287
	LDT1						
	Building Construction	187	33	18.5	114,164	25.64	4,452
	Paving	20	4	18.5	1,480	25.64	58

Year	Construction Activity	Duration (Days)	Worker (Trips/Day)	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
	Architectural Coating	40	7	18.5	5,180	25.64	202
	LDT2						
	Building Construction	187	33	18.5	114,164	25.93	4,402
	Paving	20	4	18.5	1,480	25.93	57
	Architectural Coating	40	7	18.5	5,180	25.93	200
CONSTRUCTION FUEL DEMAND (GALLONS GASOLINE FUEL)							27,008

4.3.5 CONSTRUCTION VENDOR/HAULING FUEL ESTIMATES

With respect to estimated VMT, the construction vendor trips (vehicles that deliver materials to the site during construction) would generate an estimated 760,704 VMT along area roadways for the Project over the duration of construction activity (24). 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), and 100% of all hauling trips are HHDTs. These assumptions are consistent with the CalEEMod defaults utilized within the AQIA (24). Vehicle fuel efficiencies for MHDTs and HHDTs were estimated using information generated within EMFAC2021. EMFAC2021 was run for the MHDT and HHDT vehicle classes within the San Bernardino (SC) sub-area for the 2025 and 2026 calendar years. Data from EMFAC2021 is shown in Appendix 4.3.

Based on Table 4-8, it is estimated that 119,919 gallons of diesel fuel will be consumed related to construction vendor and hauling trips during full construction of the Project.

It should be noted that Project construction vendor and hauling 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 4-8: CONSTRUCTION VENDOR/HAULING FUEL CONSUMPTION ESTIMATES

Year	Construction Activity	Duration (Days)	Vendor (Trips/Day)	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2025	MHDT						
	Demolition	20	2	10.2	408	8.46	48
	Site Preparation	10	6	10.2	612	8.46	72
	Grading	30	2	10.2	612	8.46	72
	Building Construction	113	17	10.2	19,594	8.46	2,317
	HHDT (Vendor)						
	Demolition	20	2	10.2	408	6.13	67
	Site Preparation	10	6	10.2	612	6.13	100
	Grading	30	2	10.2	612	6.13	100
	Building Construction	113	17	10.2	19,594	6.13	3,196
	HHDT (Hauling)						
	Demolition	20	6	20	2,400	6.13	392
	Grading	30	150	20	90,000	6.13	14,682
2026	MHDT						
	Building Construction	187	17	10.2	32,426	8.59	3,776
	HHDT (Vendor)						
	Building Construction	187	17	10.2	32,426	6.24	5,196
	HHDT (Hauling)						
	Building Construction	187	150	20	561,000	6.24	89,901
TOTAL CONSTRUCTION VENDOR/HAULING DIESEL FUEL CONSUMPTION							119,919

4.3.6 CONSTRUCTION ENERGY EFFICIENCY/CONSERVATION MEASURES

Starting in 2014, CARB adopted the nation's first regulation aimed at cleaning up off-road construction equipment such as bulldozers, graders, and backhoes. These requirements ensure fleets gradually turnover the oldest and dirtiest equipment to newer, cleaner models and prevent fleets from adding older, dirtier equipment. As such, the equipment used for Project construction would conform to CARB regulations and California emissions standards. It should also be noted that 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.

Construction contractors would be required to comply 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. 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.

Additional construction-source energy efficiencies would occur due to required California regulations and best available control measures (BACM). For example, 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. Section 2449(d)(3) requires that 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 required to be 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 County building officials, and/or in response to citizen complaints.

4.3.7 SAN BERNARDINO COUNTY ENERGY EFFICIENCY/CONSERVATION MEASURES

The Project will also adhere to the following San Bernardino County policies which would further reduce energy usage:

POLICY NR-1.6 FUGITIVE DUST EMISSIONS

Coordinate with air quality management districts on requirements for dust control plans, revegetation, and soil compaction to prevent fugitive dust emissions (31).

POLICY NR-1.8 CONSTRUCTION AND OPERATIONS

Invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. Encourage County contractors and other builders and developers to use low-emission construction vehicles and equipment to improve air quality and reduce emissions (31).

POLICY NR-1.9 BUILDING DESIGN AND UPGRADES

Use the CALGreen Code to meet energy efficiency standards for new buildings and encourage the upgrading of existing buildings to incorporate design elements, building materials, and fixtures that improve environmental sustainability and reduce emissions (31).

DEVELOPMENT CODE 63.0501 ADOPTION OF CALIFORNIA ENERGY CODE

The 2022 version of Title 24 was adopted by the CEC and became effective on January 1, 2023. The proposed Project would be required to comply with the Title 24 standards in place at the time plan check submittals are made (32).

SECTION 63.1501 ADOPTION OF CALIFORNIA GREEN BUILDING STANDARDS CODE

As previously stated, CCR, Title 24, Part 11: CALGreen is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that were published on July 1, 2022, and became effective on January 1, 2023. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made (33).

4.4 OPERATIONAL ENERGY DEMANDS

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by passenger car and truck 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. The VMT per vehicle class can be determined by evaluated in the vehicle fleet mix and the total VMT.

As with worker and vendors trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2021 developed by CARB (26). EMFAC2021 was run for the San Bernardino (SC) sub-area for the 2026 calendar year. Data from EMFAC2021 is shown in Appendix 4.3.

As summarized on Table 4-9, the Project will result in 3,186,715 annual VMT and an estimated annual fuel consumption of 315,731 gallons of gasoline and diesel fuel.

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

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual Miles Traveled ¹	Estimated Annual Fuel Consumption (gallons)
LDA	33.47	724,234	21,635

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual Miles Traveled ¹	Estimated Annual Fuel Consumption (gallons)
LDT1	25.64	57,147	2,228
LDT2	25.93	301,915	11,642
MDV	21.11	222,325	10,533
LHD1	16.62	40,346	2,427
LHD2	15.58	10,919	701
MHDT	8.59	514,128	59,872
HHDT	6.24	1,285,319	205,973
MCY	42.30	30,382	718
TOTAL (ALL VEHICLES)		3,186,715	315,731

¹ Total VMT may not match CalEEMod output due to rounding.

4.4.2 ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMANDS

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to one (1) 175 horsepower (hp), natural gas-powered cargo handling equipment – port tractors operating at 4 hours a day⁷ for 365 days of the year.

Project operational activity estimates and associated fuel consumption estimates are based on the annual EMFAC2021 offroad emissions for the 2026 operational year and was used to derive the total annual fuel consumption associated on-site equipment. As presented in Table 4-10, Project on-site equipment would consume an estimated 4,642 gallons of natural gas.

TABLE 4-10: ON-SITE CARGO HANDLING EQUIPMENT FUEL CONSUMPTION ESTIMATES

Equipment	Quantity	Usage Hours	Days of Operation	EMFAC2021 Fuel Consumption (gal./yr)	EMFAC2021 Activity (hrs./yr)	Total Fuel Consumption
Cargo Handling Equipment	1	4	365	18,742	5,895	4,642
ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMAND (GALLONS NATURAL GAS FUEL)						4,642

4.4.3 STATIONARY SOURCE ENERGY DEMANDS

Fuel consumption estimates from stationary sources are presented in Table 4-11. As previously stated, the aggregate fuel consumption rate for all equipment is estimated at 18.5 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. For the purposes of this analysis, the

⁷ Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

calculations are based on a 300 hp diesel-fueled fire pump. Diesel fuel would be supplied by existing industrial fuel providers serving the County and region. As presented in Table 4-11, Project stationary sources would consume an estimated 565 gallons of diesel fuel.

TABLE 4-11: STATIONARY SOURCE EQUIPMENT FUEL CONSUMPTION ESTIMATES

Equipment	Horsepower	Fuel Consumption (gal./hour)	Activity (hrs./yr)	Total Fuel Consumption (gal./year)
Fire Pump	300	11	50	565
STATIONARY SOURCE FUEL DEMAND (GALLONS DIESEL FUEL)				565

4.4.4 FACILITY ENERGY DEMANDS

Project building operations activities would result in the consumption of electricity, which would be supplied to the Project by SCE. As previously stated, the analysis herein assumes compliance with the 2022 Title 24 and CALGreen standards. Annual electricity demands of the Project are summarized in Table 4-12 and provided in Appendix 4.2.

Based on information provided by the Project Applicant, the Project would not use natural gas for the building envelope. As such, natural gas consumption has not been analyzed in this study.

TABLE 4-12: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY

Land Use	Electricity Demand (kWh/year)
Warehouse	1,438,412
Parking Lot	85,170
Other Asphalt Surfaces	0
TOTAL PROJECT ENERGY DEMAND	1,523,582

kWh – kiloWatts per hour

4.4.4 OPERATIONAL ENERGY EFFICIENCY/CONSERVATION MEASURES

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, CALGreen Standards Code).

ENHANCED VEHICLE FUEL EFFICIENCIES

Project annual fuel consumption estimates presented previously in Table 4-9 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.

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.

4.5 SUMMARY

4.5.1 CONSTRUCTION ENERGY DEMANDS

The estimated power cost of on-site electricity usage during the construction of the Project is assumed to be approximately \$26,298.07. 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 approximately 156,928 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 52,941 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. BACMs inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by County building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the Project would result in the estimated fuel consumption of 27,008 gallons of gasoline fuel. Additionally, fuel consumption from construction hauling and vendor trips (MHDTs and HHDTs) will total approximately 119,919 gallons of diesel fuel. Gasoline and diesel fuel would be supplied by County and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The 2023 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 (12). 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 will result in 3,186,715 annual VMT and an estimated annual fuel consumption of 315,731 gallons of gasoline and diesel fuel.

Fuel would be provided by current and future industrial vendors. Trip generation and VMT generated by the Project are consistent with other uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Ed., 2021); and CalEEMod. As such, Project operations would not result in excessive and wasteful vehicle trips and VMT, nor excess and wasteful vehicle energy consumption compared to similar uses.

It should be noted that the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

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. 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 0 kBTU/year of natural gas and 1,523,582 kWh/year of electricity for Project Buildout. Electricity would be supplied by SCE. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other uses of similar scale and configuration.

Lastly, the Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

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5 CONCLUSIONS

5.1 ENERGY IMPACT 1

Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis

A significant impact would occur if the proposed Project would result in the inefficient, wasteful, or unnecessary use of energy.

Construction

Based on CalEEMod estimations within the modeling output files used to estimate GHG emissions associated with the Project, construction-related vehicle trips would result in approximately 1,539,739 VMT and consume an estimated 146,927 gallons of gasoline and diesel combined during the construction phases. Additionally, on-site construction equipment would consume an estimated 52,941 gallons of diesel fuel. Limitations on idling of vehicles and equipment and requirements that equipment be properly maintained would result in fuel savings. California Code of Regulations, Title 13, Sections 2449 and 2485, limit idling from both on-road and off-road diesel- powered equipment and are enforced by the ARB. Additionally, given the cost of fuel, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Due to the temporary nature of construction and the financial incentives for developers and contractors to use energy-consuming resources in an efficient manner, the construction phase of the proposed project would not result in wasteful, inefficient, and unnecessary consumption of energy. Therefore, the construction-related impacts related fuel consumption would be less than significant.

Operation

Electricity and Natural Gas

Operation of the proposed project would consume energy as part of building operations and transportation activities. Building operations would involve energy consumption for multiple purposes including, but not limited to, building heating and cooling, refrigeration, lighting, and electronics. Based on CalEEMod energy use estimations, operations for the Project would result in approximately 0 kBTU/year of natural gas and 1,523,582 kWh/year of electricity for Project Buildout annually.

Development of the Project would be designed and constructed in accordance with the County's latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For

example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards are widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation.

Fuel

Operational energy would also be consumed during vehicle trips associated with future development projects envisioned under the proposed Project. Fuel consumption would be primarily related to vehicle use by visitors and employees associated with the Project. Based on CalEEMod energy use estimations, project-related vehicle trips would result in approximately 3,186,715 annual VMT and an estimated annual fuel consumption of 315,731 gallons of gasoline and diesel fuel.

The Project is surrounded by existing urban uses, the existing transportation facilities and infrastructure would provide visitors and employees associated with the Project access to a mix of land uses in close proximity to the Project, thus further reducing fuel consumption demand. For these reasons, operational-related transportation fuel consumption would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the operational impact related to vehicle fuel consumption would be less than significant.

5.2 ENERGY IMPACT 2

Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Analysis

A significant impact would occur if the proposed Project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Construction

As discussed in Section 5.1, above, the proposed Project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings, lighting, and other sources. CCR Title 13, Sections 2449 and 2485, limit idling from both on- road and off-road diesel-powered equipment and are enforced by the ARB. The proposed project would comply with these regulations. There are no policies at the local level applicable to energy conservation specific to the construction phase. Thus, it is anticipated that construction of the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, construction-related energy efficiency and renewable energy standards consistency impacts would be less than significant.

Operation

California's Renewable Portfolio Standard (RPS) establishes a goal of renewable energy for local providers to be 44 percent by 2040. Similarly, the State is promoting renewable energy targets to meet the 2022 Scoping Plan greenhouse gas emissions reductions. As discussed in Section 5.1, above, the Project would result in approximately 0 kBTU/year of natural gas and 1,523,582 kWh/year of electricity.

Development of the Project would be designed and constructed in accordance with the County's latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards are widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation.

Compliance with the aforementioned mandatory measures would ensure that future development projects would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, operational energy efficiency and renewable energy standards consistency impacts would be less than significant.

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7 CERTIFICATIONS

The contents of this energy analysis report represent an accurate depiction of the environmental impacts associated with the proposed Vineyard Avenue Warehouse. The information contained in this energy analysis report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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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 Professionals
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

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
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APPENDIX 4.1:

CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS

Vineyard Av. Warehouse (Construction) Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Vineyard Av. Warehouse (Construction)
Construction Start Date	5/1/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	6.40
Location	34.140815, -117.405785
County	San Bernardino-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5316
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	311	1000sqft	9.79	311,432	115,121	—	—	—
Parking Lot	248	Space	1.44	0.00	0.00	—	—	—

Other Asphalt Surfaces	4.65	Acre	4.65	0.00	0.00	—	—	—
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	40.5	40.3	33.4	44.8	0.13	0.89	5.99	6.37	0.82	2.77	3.12	—	17,493	17,493	1.38	1.78	23.4	18,081
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.15	1.01	12.8	24.0	0.03	0.41	2.00	2.41	0.38	0.48	0.86	—	5,370	5,370	0.27	0.25	0.25	5,450
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.82	4.74	7.98	13.2	0.02	0.24	1.29	1.49	0.22	0.38	0.57	—	3,496	3,496	0.21	0.23	2.21	3,573
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.88	0.86	1.46	2.40	< 0.005	0.04	0.24	0.27	0.04	0.07	0.10	—	579	579	0.04	0.04	0.37	592

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.33	1.21	33.4	44.8	0.13	0.52	5.99	6.37	0.50	2.77	3.12	—	17,493	17,493	1.38	1.78	23.4	18,081
2026	40.5	40.3	22.9	40.5	0.05	0.89	2.54	3.43	0.82	0.61	1.43	—	7,723	7,723	0.35	0.28	10.8	7,825
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.15	1.01	12.8	24.0	0.03	0.41	2.00	2.41	0.38	0.48	0.86	—	5,370	5,370	0.27	0.25	0.25	5,450
2026	1.11	0.97	12.7	23.4	0.03	0.41	2.00	2.41	0.38	0.48	0.86	—	5,317	5,317	0.21	0.25	0.23	5,396
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.61	0.46	7.98	13.1	0.02	0.20	1.29	1.49	0.19	0.38	0.57	—	3,496	3,496	0.21	0.23	2.21	3,573
2026	4.82	4.74	7.23	13.2	0.02	0.24	1.07	1.32	0.22	0.26	0.48	—	2,898	2,898	0.11	0.13	2.05	2,941
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.11	0.08	1.46	2.39	< 0.005	0.04	0.24	0.27	0.03	0.07	0.10	—	579	579	0.04	0.04	0.37	592
2026	0.88	0.86	1.32	2.40	< 0.005	0.04	0.20	0.24	0.04	0.05	0.09	—	480	480	0.02	0.02	0.34	487

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.56	12.0	18.2	0.03	0.37	—	0.37	0.35	—	0.35	—	3,425	3,425	0.14	0.03	—	3,437

Demolition	—	—	—	—	—	—	0.31	0.31	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.66	1.00	< 0.005	0.02	—	0.02	0.02	—	0.02	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	1.17	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	0.01	< 0.005	0.10	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	92.5	92.5	0.01	0.01	0.26	97.2
Hauling	0.05	0.01	0.46	0.26	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	387	387	0.04	0.06	0.82	408

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.07	5.07	< 0.005	< 0.005	0.01	5.32
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.2	21.2	< 0.005	< 0.005	0.02	22.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.78	1.78	< 0.005	< 0.005	< 0.005	1.81
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.84	0.84	< 0.005	< 0.005	< 0.005	0.88
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.51	3.51	< 0.005	< 0.005	< 0.005	3.70

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.70	17.3	30.0	0.05	0.37	—	0.37	0.34	—	0.34	—	5,528	5,528	0.22	0.04	—	5,547
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.47	0.82	< 0.005	0.01	—	0.01	0.01	—	0.01	—	151	151	0.01	< 0.005	—	152
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.09	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.1	25.1	< 0.005	< 0.005	—	25.2
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	247	247	0.01	0.01	0.91	250
Vendor	0.04	0.01	0.41	0.22	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	370	370	0.03	0.06	1.04	389
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.28	6.28	< 0.005	< 0.005	0.01	6.37

Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.6
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.05
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.68	1.68	< 0.005	< 0.005	< 0.005	1.76
Hauling	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	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.90	0.90	20.7	36.2	0.06	0.39	—	0.39	0.37	—	0.37	—	6,715	6,715	0.27	0.05	—	6,738
Dust From Material Movement	—	—	—	—	—	—	2.69	2.69	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.07	0.07	1.70	2.97	0.01	0.03	—	0.03	0.03	—	0.03	—	552	552	0.02	< 0.005	—	554

Dust From Material Movement	—	—	—	—	—	—	0.22	0.22	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.31	0.54	< 0.005	0.01	—	0.01	0.01	—	0.01	—	91.4	91.4	< 0.005	< 0.005	—	91.7
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	1.56	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	282	282	0.01	0.01	1.05	286
Vendor	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	123	123	0.01	0.02	0.35	130
Hauling	1.32	0.22	12.4	6.98	0.07	0.13	2.78	2.91	0.13	0.76	0.89	—	10,372	10,372	1.09	1.70	22.0	10,927
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.5	21.5	< 0.005	< 0.005	0.04	21.8
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.6
Hauling	0.11	0.02	1.08	0.58	0.01	0.01	0.23	0.24	0.01	0.06	0.07	—	853	853	0.09	0.14	0.79	897
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.57	3.57	< 0.005	< 0.005	0.01	3.62

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.68	1.68	< 0.005	< 0.005	< 0.005	1.76
Hauling	0.02	< 0.005	0.20	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	141	141	0.01	0.02	0.13	149

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.42	11.0	15.7	0.03	0.40	—	0.40	0.36	—	0.36	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.42	11.0	15.7	0.03	0.40	—	0.40	0.36	—	0.36	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.13	3.40	4.85	0.01	0.12	—	0.12	0.11	—	0.11	—	813	813	0.03	0.01	—	816
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.02	0.62	0.88	< 0.005	0.02	—	0.02	0.02	—	0.02	—	135	135	0.01	< 0.005	—	135
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.66	0.60	0.58	10.2	0.00	0.00	1.71	1.71	0.00	0.40	0.40	—	1,843	1,843	0.08	0.06	6.84	1,871
Vendor	0.10	0.03	1.16	0.63	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,049	1,049	0.08	0.16	2.95	1,101
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.63	0.56	0.63	7.68	0.00	0.00	1.71	1.71	0.00	0.40	0.40	—	1,690	1,690	0.08	0.06	0.18	1,711
Vendor	0.10	0.03	1.22	0.63	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,049	1,049	0.08	0.16	0.08	1,099
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.21	2.51	0.00	0.00	0.53	0.53	0.00	0.12	0.12	—	530	530	0.02	0.02	0.91	537
Vendor	0.03	0.01	0.38	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	324	324	0.03	0.05	0.40	340
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.46	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	87.7	87.7	< 0.005	< 0.005	0.15	89.0
Vendor	0.01	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	53.7	53.7	< 0.005	0.01	0.07	56.3
Hauling	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	0.00

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.42	11.0	15.7	0.03	0.40	—	0.40	0.36	—	0.36	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.42	11.0	15.7	0.03	0.40	—	0.40	0.36	—	0.36	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.22	5.66	8.07	0.01	0.20	—	0.20	0.19	—	0.19	—	1,354	1,354	0.05	0.01	—	1,358
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	1.03	1.47	< 0.005	0.04	—	0.04	0.03	—	0.03	—	224	224	0.01	< 0.005	—	225
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.63	0.57	0.52	9.42	0.00	0.00	1.71	1.71	0.00	0.40	0.40	—	1,805	1,805	0.08	0.06	6.18	1,832
Vendor	0.10	0.02	1.12	0.60	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,031	1,031	0.07	0.16	2.72	1,083
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.59	0.53	0.58	7.11	0.00	0.00	1.71	1.71	0.00	0.40	0.40	—	1,656	1,656	0.03	0.06	0.16	1,676
Vendor	0.10	0.02	1.16	0.61	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,032	1,032	0.07	0.16	0.07	1,081
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.27	0.32	3.85	0.00	0.00	0.88	0.88	0.00	0.21	0.21	—	864	864	0.01	0.03	1.37	876
Vendor	0.05	0.01	0.60	0.31	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	531	531	0.04	0.08	0.60	557
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	143	143	< 0.005	0.01	0.23	145
Vendor	0.01	< 0.005	0.11	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	87.9	87.9	0.01	0.01	0.10	92.2
Hauling	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	0.00

3.11. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.32	8.62	10.6	0.01	0.39	—	0.39	0.36	—	0.36	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.80	0.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.47	0.58	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.09	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	1.08	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	207	207	0.01	0.01	0.71	210
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.02	10.7

Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.75	1.75	< 0.005	< 0.005	< 0.005	1.77
Vendor	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	0.00
Hauling	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	0.00

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.07	0.07	1.45	1.28	< 0.005	0.09	—	0.09	0.08	—	0.08	—	178	178	0.01	< 0.005	—	179
Architect ural Coating s	37.9	37.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.01	0.01	0.16	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.5	19.5	< 0.005	< 0.005	—	19.6

Architectural	4.16	4.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.23	3.23	< 0.005	< 0.005	—	3.24
Architectural Coatings	0.76	0.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.10	1.88	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	361	361	0.02	0.01	1.24	366
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.8	36.8	< 0.005	< 0.005	0.06	37.3
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.09	6.09	< 0.005	< 0.005	0.01	6.17
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	5/2/2025	5/29/2025	5.00	20.0	—
Site Preparation	Site Preparation	5/31/2025	6/13/2025	5.00	10.0	—
Grading	Grading	6/14/2025	7/26/2025	5.00	30.0	—
Building Construction	Building Construction	7/27/2025	9/20/2026	5.00	300	—
Paving	Paving	8/24/2026	9/20/2026	5.00	20.0	—
Architectural Coating	Architectural Coating	7/27/2026	9/20/2026	5.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Interim	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Tier 3	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Tier 3	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	8.00	367	0.40

Site Preparation	Crawler Tractors	Diesel	Tier 3	4.00	8.00	87.0	0.43
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 3	2.00	8.00	36.0	0.38
Grading	Scrapers	Diesel	Tier 4 Interim	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Crawler Tractors	Diesel	Tier 3	2.00	8.00	87.0	0.43
Building Construction	Forklifts	Diesel	Tier 3	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 3	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Tier 4 Interim	1.00	8.00	367	0.29
Building Construction	Welders	Diesel	Tier 3	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Back hoes	Diesel	Tier 3	3.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Tier 3	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 3	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 3	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 3	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	3.00	10.2	HHDT,MHDT
Demolition	Hauling	5.60	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	12.0	10.2	HHDT,MHDT

Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	4.00	10.2	HHDT,MHDT
Grading	Hauling	150	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	131	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	34.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	26.2	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	467,148	155,716	15,917

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	448	—
Site Preparation	—	—	35.0	0.00	—
Grading	36,000	—	120	0.00	—
Paving	0.00	0.00	0.00	0.00	6.09

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	1.44	100%
Other Asphalt Surfaces	4.65	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
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2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.6	annual days of extreme heat
Extreme Precipitation	6.85	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth

Wildfire	15.9	annual hectares burned
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Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	98.7
AQ-PM	76.3
AQ-DPM	52.6
Drinking Water	95.8
Lead Risk Housing	10.9
Pesticides	0.00
Toxic Releases	62.6
Traffic	61.3
Effect Indicators	—
CleanUp Sites	88.3

Groundwater	97.4
Haz Waste Facilities/Generators	85.2
Impaired Water Bodies	0.00
Solid Waste	93.6
Sensitive Population	—
Asthma	48.9
Cardio-vascular	83.4
Low Birth Weights	65.8
Socioeconomic Factor Indicators	—
Education	48.8
Housing	12.8
Linguistic	40.4
Poverty	36.8
Unemployment	77.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	68.84383421
Employed	51.71307584
Median HI	83.8829719
Education	—
Bachelor's or higher	52.44450148
High school enrollment	21.68612858
Preschool enrollment	34.36417298
Transportation	—
Auto Access	89.83703323

Active commuting	19.63300398
Social	—
2-parent households	67.67611959
Voting	45.05325292
Neighborhood	—
Alcohol availability	57.141024
Park access	29.05171308
Retail density	28.8848967
Supermarket access	25.09944822
Tree canopy	13.5249583
Housing	—
Homeownership	90.85076351
Housing habitability	84.89670217
Low-inc homeowner severe housing cost burden	55.43436417
Low-inc renter severe housing cost burden	80.94443732
Uncrowded housing	55.74233286
Health Outcomes	—
Insured adults	58.10342615
Arthritis	86.8
Asthma ER Admissions	49.5
High Blood Pressure	83.5
Cancer (excluding skin)	77.2
Asthma	61.7
Coronary Heart Disease	91.8
Chronic Obstructive Pulmonary Disease	86.1
Diagnosed Diabetes	72.3
Life Expectancy at Birth	29.4
Cognitively Disabled	56.3

Physically Disabled	77.4
Heart Attack ER Admissions	27.7
Mental Health Not Good	61.1
Chronic Kidney Disease	90.3
Obesity	60.5
Pedestrian Injuries	19.6
Physical Health Not Good	71.4
Stroke	88.3
Health Risk Behaviors	—
Binge Drinking	30.9
Current Smoker	56.8
No Leisure Time for Physical Activity	61.9
Climate Change Exposures	—
Wildfire Risk	12.6
SLR Inundation Area	0.0
Children	11.7
Elderly	83.6
English Speaking	54.8
Foreign-born	60.5
Outdoor Workers	41.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	68.7
Traffic Density	51.4
Traffic Access	23.0
Other Indices	—
Hardship	49.6
Other Decision Support	—
2016 Voting	53.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	80.0
Healthy Places Index Score for Project Location (b)	59.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Total Project area is 15.89 acres
Construction: Off-Road Equipment	Tier 3 for equipment less than 100 hp and Tier 4 for equipment over 100 hp
Construction: Architectural Coatings	Rule 1113
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction
Construction: Construction Phases	Construction anticipated to end in 2026

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APPENDIX 4.2:

CALEEMOD OPERATIONS EMISSIONS MODEL OUTPUTS

Vineyard Av. Warehouse (Operations) Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Vineyard Av. Warehouse (Operations)
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	6.40
Location	34.140815, -117.405785
County	San Bernardino-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5316
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	311	1000sqft	9.79	311,432	115,121	—	—	—

User Defined Industrial	311	User Defined Unit	0.00	0.00	0.00	—	—	—
Parking Lot	248	Space	2.23	0.00	0.00	—	—	—
Other Asphalt Surfaces	4.65	Acre	4.65	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.8	11.8	23.3	41.9	0.23	0.41	9.61	10.0	0.39	2.52	2.91	296	26,922	27,218	31.9	3.70	62.4	29,180
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.4	9.52	24.2	25.3	0.22	0.39	9.61	10.00	0.37	2.52	2.90	296	26,587	26,883	31.9	3.71	1.62	28,786
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.7	10.2	17.1	27.4	0.16	0.26	7.01	7.26	0.24	1.84	2.08	296	19,888	20,184	31.4	2.81	19.7	21,825
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.13	1.86	3.13	5.01	0.03	0.05	1.28	1.33	0.04	0.34	0.38	49.0	3,293	3,342	5.20	0.47	3.27	3,613

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.39	1.60	21.8	27.1	0.23	0.31	9.61	9.93	0.30	2.52	2.82	—	24,695	24,695	1.74	3.34	62.4	25,797
Area	9.91	9.73	0.11	13.5	< 0.005	0.02	—	0.02	0.02	—	0.02	—	55.7	55.7	< 0.005	< 0.005	—	55.9
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,445	1,445	0.14	0.02	—	1,454
Water	—	—	—	—	—	—	—	—	—	—	—	138	474	612	14.2	0.34	—	1,069
Waste	—	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	552
Stationary	0.54	0.49	1.38	1.26	< 0.005	0.07	0.00	0.07	0.07	0.00	0.07	0.00	252	252	0.01	< 0.005	0.00	253
Total	13.8	11.8	23.3	41.9	0.23	0.41	9.61	10.0	0.39	2.52	2.91	296	26,922	27,218	31.9	3.70	62.4	29,180
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.32	1.52	22.8	24.0	0.22	0.31	9.61	9.93	0.30	2.52	2.82	—	24,416	24,416	1.75	3.35	1.62	25,459
Area	7.50	7.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,445	1,445	0.14	0.02	—	1,454
Water	—	—	—	—	—	—	—	—	—	—	—	138	474	612	14.2	0.34	—	1,069
Waste	—	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	552
Stationary	0.54	0.49	1.38	1.26	< 0.005	0.07	0.00	0.07	0.07	0.00	0.07	0.00	252	252	0.01	< 0.005	0.00	253
Total	11.4	9.52	24.2	25.3	0.22	0.39	9.61	10.00	0.37	2.52	2.90	296	26,587	26,883	31.9	3.71	1.62	28,786
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.43	1.11	16.9	18.0	0.16	0.23	7.01	7.24	0.22	1.84	2.06	—	17,896	17,896	1.28	2.45	19.7	18,678
Area	9.15	9.03	0.08	9.28	< 0.005	0.02	—	0.02	0.01	—	0.01	—	38.1	38.1	< 0.005	< 0.005	—	38.3
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,445	1,445	0.14	0.02	—	1,454
Water	—	—	—	—	—	—	—	—	—	—	—	138	474	612	14.2	0.34	—	1,069
Waste	—	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	552

Stationary	0.07	0.07	0.19	0.17	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	34.5	34.5	< 0.005	< 0.005	0.00	34.6
Total	11.7	10.2	17.1	27.4	0.16	0.26	7.01	7.26	0.24	1.84	2.08	296	19,888	20,184	31.4	2.81	19.7	21,825
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.44	0.20	3.08	3.28	0.03	0.04	1.28	1.32	0.04	0.34	0.38	—	2,963	2,963	0.21	0.41	3.27	3,092
Area	1.67	1.65	0.01	1.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.32	6.32	< 0.005	< 0.005	—	6.34
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	239	239	0.02	< 0.005	—	241
Water	—	—	—	—	—	—	—	—	—	—	—	22.8	78.5	101	2.35	0.06	—	177
Waste	—	—	—	—	—	—	—	—	—	—	—	26.1	0.00	26.1	2.61	0.00	—	91.4
Stationary	0.01	0.01	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	5.71	5.71	< 0.005	< 0.005	0.00	5.73
Total	2.13	1.86	3.13	5.01	0.03	0.05	1.28	1.33	0.04	0.34	0.38	49.0	3,293	3,342	5.20	0.47	3.27	3,613

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.38	1.26	0.77	16.0	0.04	0.01	3.49	3.50	0.01	0.88	0.89	—	3,582	3,582	0.11	0.08	11.7	3,620
User Defined Industrial	2.01	0.34	21.0	11.1	0.19	0.30	6.13	6.42	0.29	1.64	1.93	—	21,114	21,114	1.63	3.26	50.7	22,177

Parking Lot	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	0.00
Other Asphalt Surfaces	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	0.00
Total	3.39	1.60	21.8	27.1	0.23	0.31	9.61	9.93	0.30	2.52	2.82	—	24,695	24,695	1.74	3.34	62.4	25,797
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig erated Wareho use-No Rail	1.32	1.19	0.85	12.9	0.03	0.01	3.49	3.50	0.01	0.88	0.89	—	3,298	3,298	0.12	0.09	0.30	3,326
User Defined Industrial	2.00	0.33	21.9	11.1	0.19	0.30	6.13	6.43	0.29	1.64	1.93	—	21,118	21,118	1.63	3.26	1.32	22,132
Parking Lot	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	0.00
Other Asphalt Surfaces	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	0.00
Total	3.32	1.52	22.8	24.0	0.22	0.31	9.61	9.93	0.30	2.52	2.82	—	24,416	24,416	1.75	3.35	1.62	25,459
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig erated Wareho use-No Rail	0.17	0.16	0.12	1.80	< 0.005	< 0.005	0.46	0.47	< 0.005	0.12	0.12	—	405	405	0.01	0.01	0.61	409
User Defined Industrial	0.27	0.04	2.96	1.48	0.03	0.04	0.82	0.86	0.04	0.22	0.26	—	2,558	2,558	0.20	0.40	2.65	2,683
Parking Lot	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	0.00
Other Asphalt Surfaces	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	0.00

Total	0.44	0.20	3.08	3.28	0.03	0.04	1.28	1.32	0.04	0.34	0.38	—	2,963	2,963	0.21	0.41	3.27	3,092
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4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,364	1,364	0.13	0.02	—	1,372
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	80.8	80.8	0.01	< 0.005	—	81.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,445	1,445	0.14	0.02	—	1,454
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,364	1,364	0.13	0.02	—	1,372
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	80.8	80.8	0.01	< 0.005	—	81.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,445	1,445	0.14	0.02	—	1,454
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	226	226	0.02	< 0.005	—	227
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	13.4	13.4	< 0.005	< 0.005	—	13.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	239	239	0.02	< 0.005	—	241

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	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

User Defined Industrial	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
Parking Lot	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
Other Asphalt Surfaces	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
Total	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig erated Wareho use-No Rail	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
User Defined Industrial	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
Parking Lot	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
Other Asphalt Surfaces	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
Total	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig erated Wareho use-No Rail	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
User Defined Industrial	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
Parking Lot	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

Other Asphalt Surfaces	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
Total	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

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	6.69	6.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.81	0.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.41	2.22	0.11	13.5	< 0.005	0.02	—	0.02	0.02	—	0.02	—	55.7	55.7	< 0.005	< 0.005	—	55.9
Total	9.91	9.73	0.11	13.5	< 0.005	0.02	—	0.02	0.02	—	0.02	—	55.7	55.7	< 0.005	< 0.005	—	55.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	6.69	6.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	0.81	0.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	7.50	7.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.22	1.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.15	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.30	0.28	0.01	1.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.32	6.32	< 0.005	< 0.005	—	6.34
Total	1.67	1.65	0.01	1.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.32	6.32	< 0.005	< 0.005	—	6.34

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	138	474	612	14.2	0.34	—	1,069

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	138	474	612	14.2	0.34	—	1,069
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig erated Wareho use-No Rail	—	—	—	—	—	—	—	—	—	—	—	138	474	612	14.2	0.34	—	1,069
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	138	474	612	14.2	0.34	—	1,069
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig erated Wareho use-No Rail	—	—	—	—	—	—	—	—	—	—	—	22.8	78.5	101	2.35	0.06	—	177
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	22.8	78.5	101	2.35	0.06	—	177

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	552
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	552
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	552

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	552
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	26.1	0.00	26.1	2.61	0.00	—	91.4
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	26.1	0.00	26.1	2.61	0.00	—	91.4

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipm ent Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipm ent Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	0.54	0.49	1.38	1.26	< 0.005	0.07	0.00	0.07	0.07	0.00	0.07	0.00	252	252	0.01	< 0.005	0.00	253
Total	0.54	0.49	1.38	1.26	< 0.005	0.07	0.00	0.07	0.07	0.00	0.07	0.00	252	252	0.01	< 0.005	0.00	253
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	0.54	0.49	1.38	1.26	< 0.005	0.07	0.00	0.07	0.07	0.00	0.07	0.00	252	252	0.01	< 0.005	0.00	253
Total	0.54	0.49	1.38	1.26	< 0.005	0.07	0.00	0.07	0.07	0.00	0.07	0.00	252	252	0.01	< 0.005	0.00	253
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	0.01	0.01	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	5.71	5.71	< 0.005	< 0.005	0.00	5.73
Total	0.01	0.01	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	5.71	5.71	< 0.005	< 0.005	0.00	5.73

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	320	27.9	11.1	85,464	5,002	436	174	1,336,004
User Defined Industrial	216	18.8	7.54	57,691	6,930	603	242	1,850,712
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	467,148	155,716	17,987

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	1,438,412	346	0.0330	0.0040	0.00
User Defined Industrial	0.00	346	0.0330	0.0040	0.00
Parking Lot	85,170	346	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	72,018,650	1,848,742
User Defined Industrial	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	293	—
User Defined Industrial	0.00	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Fire Pump	Diesel	1.00	1.00	50.0	300	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
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5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.6	annual days of extreme heat
Extreme Precipitation	6.85	annual days with precipitation above 20 mm

Sea Level Rise	0.00	meters of inundation depth
Wildfire	15.9	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	98.7
AQ-PM	76.3
AQ-DPM	52.6
Drinking Water	95.8
Lead Risk Housing	10.9
Pesticides	0.00
Toxic Releases	62.6
Traffic	61.3
Effect Indicators	—

CleanUp Sites	88.3
Groundwater	97.4
Haz Waste Facilities/Generators	85.2
Impaired Water Bodies	0.00
Solid Waste	93.6
Sensitive Population	—
Asthma	48.9
Cardio-vascular	83.4
Low Birth Weights	65.8
Socioeconomic Factor Indicators	—
Education	48.8
Housing	12.8
Linguistic	40.4
Poverty	36.8
Unemployment	77.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	68.84383421
Employed	51.71307584
Median HI	83.8829719
Education	—
Bachelor's or higher	52.44450148
High school enrollment	21.68612858
Preschool enrollment	34.36417298
Transportation	—

Auto Access	89.83703323
Active commuting	19.63300398
Social	—
2-parent households	67.67611959
Voting	45.05325292
Neighborhood	—
Alcohol availability	57.141024
Park access	29.05171308
Retail density	28.8848967
Supermarket access	25.09944822
Tree canopy	13.5249583
Housing	—
Homeownership	90.85076351
Housing habitability	84.89670217
Low-inc homeowner severe housing cost burden	55.43436417
Low-inc renter severe housing cost burden	80.94443732
Uncrowded housing	55.74233286
Health Outcomes	—
Insured adults	58.10342615
Arthritis	86.8
Asthma ER Admissions	49.5
High Blood Pressure	83.5
Cancer (excluding skin)	77.2
Asthma	61.7
Coronary Heart Disease	91.8
Chronic Obstructive Pulmonary Disease	86.1
Diagnosed Diabetes	72.3
Life Expectancy at Birth	29.4

Cognitively Disabled	56.3
Physically Disabled	77.4
Heart Attack ER Admissions	27.7
Mental Health Not Good	61.1
Chronic Kidney Disease	90.3
Obesity	60.5
Pedestrian Injuries	19.6
Physical Health Not Good	71.4
Stroke	88.3
Health Risk Behaviors	—
Binge Drinking	30.9
Current Smoker	56.8
No Leisure Time for Physical Activity	61.9
Climate Change Exposures	—
Wildfire Risk	12.6
SLR Inundation Area	0.0
Children	11.7
Elderly	83.6
English Speaking	54.8
Foreign-born	60.5
Outdoor Workers	41.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	68.7
Traffic Density	51.4
Traffic Access	23.0
Other Indices	—
Hardship	49.6
Other Decision Support	—

2016 Voting	53.9
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7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	80.0
Healthy Places Index Score for Project Location (b)	59.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
 b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Total Project area is 15.89 acres
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, & MCY). Truck Mix based on information in the Traffic analysis
Operations: Energy Use	No natural gas will be used

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APPENDIX 4.3:

EMFAC2021

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
San Bernardino (SC)	2024	HHDT	Aggregate	Aggregate	Gasoline	5.565987525	200.7100937	0.053685222	53.68522156	320576.6084	200.7100937	1931561.832	6.03	HHDT
San Bernardino (SC)	2024	HHDT	Aggregate	Aggregate	Diesel	14231.95658	1766161.303	294.8811952	294881.1952		1766161.303			
San Bernardino (SC)	2024	HHDT	Aggregate	Aggregate	Electricity	48.62871821	4853.771805	0	0		4853.771805			
San Bernardino (SC)	2024	HHDT	Aggregate	Aggregate	Natural Gas	2469.470738	160346.0479	25.64172796	25641.72796		160346.0479			
San Bernardino (SC)	2024	LDA	Aggregate	Aggregate	Gasoline	459317.1397	20167734.04	678.0067332	678006.7332	689480.9135	20167734.04	21769357.53	31.57	LDA
San Bernardino (SC)	2024	LDA	Aggregate	Aggregate	Diesel	1047.589492	37687.90898	0.878080701	878.0807006		37687.90898			
San Bernardino (SC)	2024	LDA	Aggregate	Aggregate	Electricity	19287.2826	922159.8322	0	0		922159.8322			
San Bernardino (SC)	2024	LDA	Aggregate	Aggregate	Plug-in Hybrid	12500.45848	641775.7563	10.5960996	10596.0996		641775.7563			
San Bernardino (SC)	2024	LDT1	Aggregate	Aggregate	Gasoline	40725.35771	1412436.812	57.61437754	57614.37754	57660.77698	1412436.812	1417994.863	24.59	LDT1
San Bernardino (SC)	2024	LDT1	Aggregate	Aggregate	Diesel	10.72175816	158.8104429	0.006542477	6.542476778		158.8104429			
San Bernardino (SC)	2024	LDT1	Aggregate	Aggregate	Electricity	58.29951204	2744.162081	0	0		2744.162081			
San Bernardino (SC)	2024	LDT1	Aggregate	Aggregate	Plug-in Hybrid	51.79076029	2655.077851	0.039856963	39.85696305		2655.077851			
San Bernardino (SC)	2024	LDT2	Aggregate	Aggregate	Gasoline	192654.7494	7946861.936	328.2807397	328280.7397	330225.39	7946861.936	8092457.996	24.51	LDT2
San Bernardino (SC)	2024	LDT2	Aggregate	Aggregate	Diesel	520.896721	23279.78377	0.7022627	702.2627003		23279.78377			
San Bernardino (SC)	2024	LDT2	Aggregate	Aggregate	Electricity	1199.246991	43242.4945	0	0		43242.4945			
San Bernardino (SC)	2024	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1594.625518	79073.78143	1.24238757	1242.38757		79073.78143			
San Bernardino (SC)	2024	LHDT1	Aggregate	Aggregate	Gasoline	17179.49082	637558.6823	46.93129933	46931.29933	68120.12603	637558.6823	1077239.622	15.81	LHDT1
San Bernardino (SC)	2024	LHDT1	Aggregate	Aggregate	Diesel	11382.09786	435758.4326	21.1888267	21188.8267		435758.4326			
San Bernardino (SC)	2024	LHDT1	Aggregate	Aggregate	Electricity	52.7403112	3922.506902	0	0		3922.506902			
San Bernardino (SC)	2024	LHDT2	Aggregate	Aggregate	Gasoline	2883.702401	102543.2335	8.523099836	8523.099836	19386.27641	102543.2335	290170.8153	14.97	LHDT2
San Bernardino (SC)	2024	LHDT2	Aggregate	Aggregate	Diesel	4825.532255	186665.6444	10.86317658	10863.17658		186665.6444			
San Bernardino (SC)	2024	LHDT2	Aggregate	Aggregate	Electricity	13.65084178	961.9374735	0	0		961.9374735			
San Bernardino (SC)	2024	MCY	Aggregate	Aggregate	Gasoline	20751.92893	123685.0541	2.946367925	2946.367925	2946.367925	123685.0541	123685.0541	41.98	MCY
San Bernardino (SC)	2024	MDV	Aggregate	Aggregate	Gasoline	147141.1277	5830683.861	296.7902416	296790.2416	300889.4492	5830683.861	6007732.23	19.97	MDV
San Bernardino (SC)	2024	MDV	Aggregate	Aggregate	Diesel	1910.88318	77417.93798	3.254905083	3254.905083		77417.93798			
San Bernardino (SC)	2024	MDV	Aggregate	Aggregate	Electricity	1327.48959	47850.30724	0	0		47850.30724			
San Bernardino (SC)	2024	MDV	Aggregate	Aggregate	Plug-in Hybrid	1028.690257	51780.12453	0.844302537	844.3025368		51780.12453			
San Bernardino (SC)	2024	MH	Aggregate	Aggregate	Gasoline	3401.970527	30215.87901	6.184856876	6184.856876	7364.77817	30215.87901	42284.2868	5.74	MH
San Bernardino (SC)	2024	MH	Aggregate	Aggregate	Diesel	1336.39751	12068.40778	1.179921294	1179.921294		12068.40778			
San Bernardino (SC)	2024	MHDT	Aggregate	Aggregate	Gasoline	1460.602089	78395.7093	15.05623591	15056.23591	88813.34178	78395.7093	740808.1193	8.34	MHDT
San Bernardino (SC)	2024	MHDT	Aggregate	Aggregate	Diesel	14946.4736	650565.6856	72.65830331	72658.30331		650565.6856			
San Bernardino (SC)	2024	MHDT	Aggregate	Aggregate	Electricity	46.13645649	2344.169726	0	0		2344.169726			
San Bernardino (SC)	2024	MHDT	Aggregate	Aggregate	Natural Gas	195.6757264	9502.554663	1.098802564	1098.802564		9502.554663			
San Bernardino (SC)	2024	OBUS	Aggregate	Aggregate	Gasoline	370.0192137	15806.92249	3.09514692	3095.14692	5378.066575	15806.92249	33062.62008	6.15	OBUS
San Bernardino (SC)	2024	OBUS	Aggregate	Aggregate	Diesel	210.5519789	15196.96791	2.055015596	2055.015596		15196.96791			
San Bernardino (SC)	2024	OBUS	Aggregate	Aggregate	Electricity	0.809761934	65.22582716	0	0		65.22582716			
San Bernardino (SC)	2024	OBUS	Aggregate	Aggregate	Natural Gas	32.78528924	1993.503854	0.227904058	227.9040581		1993.503854			
San Bernardino (SC)	2024	SBUS	Aggregate	Aggregate	Gasoline	297.8692006	14022.10243	1.564009513	1564.009513	4951.794465	14022.10243	31836.21175	6.43	SBUS
San Bernardino (SC)	2024	SBUS	Aggregate	Aggregate	Diesel	373.2941498	7747.295585	1.052431626	1052.431626		7747.295585			
San Bernardino (SC)	2024	SBUS	Aggregate	Aggregate	Electricity	2.213199982	56.32019914	0	0		56.32019914			
San Bernardino (SC)	2024	SBUS	Aggregate	Aggregate	Natural Gas	398.7600331	10010.49353	2.335353326	2335.353326		10010.49353			
San Bernardino (SC)	2024	UBUS	Aggregate	Aggregate	Gasoline	54.72012078	5253.853518	0.406450205	406.450205	8263.421636	5253.853518	40123.45681	4.86	UBUS
San Bernardino (SC)	2024	UBUS	Aggregate	Aggregate	Diesel	4.556959009	449.8374364	0.043468777	43.46877693		449.8374364			
San Bernardino (SC)	2024	UBUS	Aggregate	Aggregate	Electricity	7.328344802	1111.359033	0	0		1111.359033			
San Bernardino (SC)	2024	UBUS	Aggregate	Aggregate	Natural Gas	243.3602145	33308.40682	7.813502654	7813.502654		33308.40682			

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (SC)
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VTM	Fuel_Consumption	Fuel_Consumption	Total Fuel	VTM	Total VTM	Miles per Gallon	Vehicle Class
San Bernardino (SC)	2025	HHDT	Aggregate	Aggregate	Gasoline	3.869766832	177.2217014	0.044579975	44.57997511	322298.7048	177.2217014	1975659.248	6.13	HHDT
San Bernardino (SC)	2025	HHDT	Aggregate	Aggregate	Diesel	14693.60242	1799109.244	296.221758	296221.758		1799109.244			
San Bernardino (SC)	2025	HHDT	Aggregate	Aggregate	Electricity	109.5985203	11409.19414	0	0		11409.19414			
San Bernardino (SC)	2025	HHDT	Aggregate	Aggregate	Natural Gas	2560.5176	164963.5875	26.0323668	26032.3668		164963.5875			
San Bernardino (SC)	2025	LDA	Aggregate	Aggregate	Gasoline	457374.7047	20012363.19	659.2303928	659230.3928	671181.1368	20012363.19	21858504.21	32.57	LDA
San Bernardino (SC)	2025	LDA	Aggregate	Aggregate	Diesel	986.5858319	34821.96021	0.803361461	803.3614609		34821.96021			
San Bernardino (SC)	2025	LDA	Aggregate	Aggregate	Electricity	22921.29943	1119595.112	0	0		1119595.112			
San Bernardino (SC)	2025	LDA	Aggregate	Aggregate	Plug-in Hybrid	13621.71468	691723.9558	11.14738256	11147.38256		691723.9558			
San Bernardino (SC)	2025	LDT1	Aggregate	Aggregate	Gasoline	39862.49619	1386010.237	55.44488475	55444.88475	55506.30461	1386010.237	1393998.156	25.11	LDT1
San Bernardino (SC)	2025	LDT1	Aggregate	Aggregate	Diesel	9.62153332	138.8700264	0.005712258	5.712257886		138.8700264			
San Bernardino (SC)	2025	LDT1	Aggregate	Aggregate	Electricity	81.74409231	4029.090974	0	0		4029.090974			
San Bernardino (SC)	2025	LDT1	Aggregate	Aggregate	Plug-in Hybrid	75.22656194	3819.958249	0.055707597	55.70759743		3819.958249			
San Bernardino (SC)	2025	LDT2	Aggregate	Aggregate	Gasoline	197589.8024	8156000.659	328.0141754	328014.1754	330196.8511	8156000.659	8333682.032	25.24	LDT2
San Bernardino (SC)	2025	LDT2	Aggregate	Aggregate	Diesel	559.2848358	24877.85405	0.732985994	732.9859937		24877.85405			
San Bernardino (SC)	2025	LDT2	Aggregate	Aggregate	Electricity	1637.444663	58171.59292	0	0		58171.59292			
San Bernardino (SC)	2025	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1934.989022	94631.92591	1.449689627	1449.689627		94631.92591			
San Bernardino (SC)	2025	LHDT1	Aggregate	Aggregate	Gasoline	16963.11371	633447.7463	45.45107153	45451.07153	66469.9942	633447.7463	1077884.454	16.22	LHDT1
San Bernardino (SC)	2025	LHDT1	Aggregate	Aggregate	Diesel	11403.02981	434286.2222	21.01892267	21018.92267		434286.2222			
San Bernardino (SC)	2025	LHDT1	Aggregate	Aggregate	Electricity	147.3648902	10150.48537	0	0		10150.48537			
San Bernardino (SC)	2025	LHDT2	Aggregate	Aggregate	Gasoline	2823.949841	99825.11713	8.149183621	8149.183621	18984.07565	99825.11713	289811.7154	15.27	LHDT2
San Bernardino (SC)	2025	LHDT2	Aggregate	Aggregate	Diesel	4888.887446	187525.0486	10.83489203	10834.89203		187525.0486			
San Bernardino (SC)	2025	LHDT2	Aggregate	Aggregate	Electricity	37.58571717	2461.549606	0	0		2461.549606			
San Bernardino (SC)	2025	MCY	Aggregate	Aggregate	Gasoline	20826.96994	123280.6812	2.925130919	2925.130919	2925.130919	123280.6812	123280.6812	42.15	MCY
San Bernardino (SC)	2025	MDV	Aggregate	Aggregate	Gasoline	147056.3511	5833561.643	289.7409456	289740.9456	293881.6654	5833561.643	6036663.747	20.54	MDV
San Bernardino (SC)	2025	MDV	Aggregate	Aggregate	Diesel	1906.902909	76374.47974	3.151065928	3151.065928		76374.47974			
San Bernardino (SC)	2025	MDV	Aggregate	Aggregate	Electricity	1802.834782	63969.43971	0	0		63969.43971			
San Bernardino (SC)	2025	MDV	Aggregate	Aggregate	Plug-in Hybrid	1256.812117	62758.18504	0.98965379	989.6537902		62758.18504			
San Bernardino (SC)	2025	MH	Aggregate	Aggregate	Gasoline	3227.585522	28520.15334	5.836852659	5836.852659	6997.412696	28520.15334	40386.16204	5.77	MH
San Bernardino (SC)	2025	MH	Aggregate	Aggregate	Diesel	1329.243498	11866.0087	1.160560036	1160.560036		11866.0087			
San Bernardino (SC)	2025	MHDT	Aggregate	Aggregate	Gasoline	1427.423114	76828.767	14.58515666	14585.15666	88952.25214	76828.767	752323.1368	8.46	MHDT
San Bernardino (SC)	2025	MHDT	Aggregate	Aggregate	Diesel	15347.54129	658670.5437	73.22420436	73224.20436		658670.5437			
San Bernardino (SC)	2025	MHDT	Aggregate	Aggregate	Electricity	133.1585562	6928.399641	0	0		6928.399641			
San Bernardino (SC)	2025	MHDT	Aggregate	Aggregate	Natural Gas	208.419151	9895.426472	1.142891124	1142.891124		9895.426472			
San Bernardino (SC)	2025	OBUS	Aggregate	Aggregate	Gasoline	358.2884481	15030.55432	2.914537526	2914.537526	5188.582188	15030.55432	32494.86271	6.26	OBUS
San Bernardino (SC)	2025	OBUS	Aggregate	Aggregate	Diesel	215.4704252	15216.87274	2.039111404	2039.111404		15216.87274			
San Bernardino (SC)	2025	OBUS	Aggregate	Aggregate	Electricity	1.990200949	157.0570869	0	0		157.0570869			
San Bernardino (SC)	2025	OBUS	Aggregate	Aggregate	Natural Gas	34.88313202	2090.378559	0.234933258	234.9332579		2090.378559			
San Bernardino (SC)	2025	SBUS	Aggregate	Aggregate	Gasoline	300.4577721	14124.28621	1.57111818	1571.11818	4959.876607	14124.28621	31963.06277	6.44	SBUS
San Bernardino (SC)	2025	SBUS	Aggregate	Aggregate	Diesel	363.8707141	7488.892183	1.014599014	1014.599014		7488.892183			
San Bernardino (SC)	2025	SBUS	Aggregate	Aggregate	Electricity	4.690534617	132.2929048	0	0		132.2929048			
San Bernardino (SC)	2025	SBUS	Aggregate	Aggregate	Natural Gas	411.4766102	10217.59148	2.374159413	2374.159413		10217.59148			
San Bernardino (SC)	2025	UBUS	Aggregate	Aggregate	Gasoline	54.83056931	5264.458034	0.406547565	406.5475652	8275.384496	5264.458034	40204.44305	4.86	UBUS
San Bernardino (SC)	2025	UBUS	Aggregate	Aggregate	Diesel	4.529432466	447.4667714	0.043317656	43.31765633		447.4667714			
San Bernardino (SC)	2025	UBUS	Aggregate	Aggregate	Electricity	7.409987909	1124.502697	0	0		1124.502697			
San Bernardino (SC)	2025	UBUS	Aggregate	Aggregate	Natural Gas	243.8212922	33368.01555	7.825519274	7825.519274		33368.01555			

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