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**BCI IV Harvill Industrial Center  
(PPT220001)  
ENERGY ANALYSIS  
COUNTY OF RIVERSIDE**

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## **LIST OF ABBREVIATED TERMS**

%	Percent
(1)	Reference
AGSP	Airport Gateway Specific Plan
AQIA	<i>BCI IV Harvill Industrial Center 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	County of Riverside
CPEP	Clean Power and Electrification Pathway
CPUC	California Public Utilities Commission
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
HHD	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
LHD1/LHD2	Light-Heavy Duty Trucks
MDV	Medium Duty Trucks
MHD	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	BCI IV Harvill Industrial Center
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 <sup>st</sup> Century
U.S.	United States
VMT	Vehicle Miles Traveled

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## EXECUTIVE SUMMARY

### ES.1 SUMMARY OF FINDINGS

The results of this *BCI IV Harvill Industrial Center Energy Analysis* is summarized below based on the significance criteria in Section 5 of this report consistent with Appendix G of the 2022 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 21<sup>st</sup> 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 BCI IV Harvill Industrial Center Project (Project). The purpose of this report is to ensure that energy implication is considered by the County of Riverside (Lead Agency), as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the proposed Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

## 1.1 SITE LOCATION

The proposed Project is located on the northeast corner of Harvill Avenue and Cajalco Road in the County of Riverside, as shown on Exhibit 1-A.

## 1.2 PROJECT DESCRIPTION

Since future tenants are unknown, the analysis herein considers two options for the proposed building. “Option A” considers the development of 99,770 square feet (sf) of industrial use with a 118-stall truck parking lot. “Option B” considers the development of 99,770 square feet (sf) of warehouse use with a 118-stall truck parking lot. The site plan for the proposed Project is shown on Exhibit 1-B. Although the latest plan reflects a 118-stall truck parking lot, the analysis conducted conservatively assumes a 133-stall truck parking lot, which is consistent with the Traffic Analysis and associated trip generation evaluated for the Project. The Project does not propose a cold storage use and therefore is not expected to generate Transport Refrigeration Units (TRUs). The Project site has a General Plan Land Use designation of Light Industrial (LI) and zoning designation of Manufacturing-Service Commercial (M-SC). APNs are 317-130-034 and -035.

EXHIBIT 1-A: LOCATION MAP

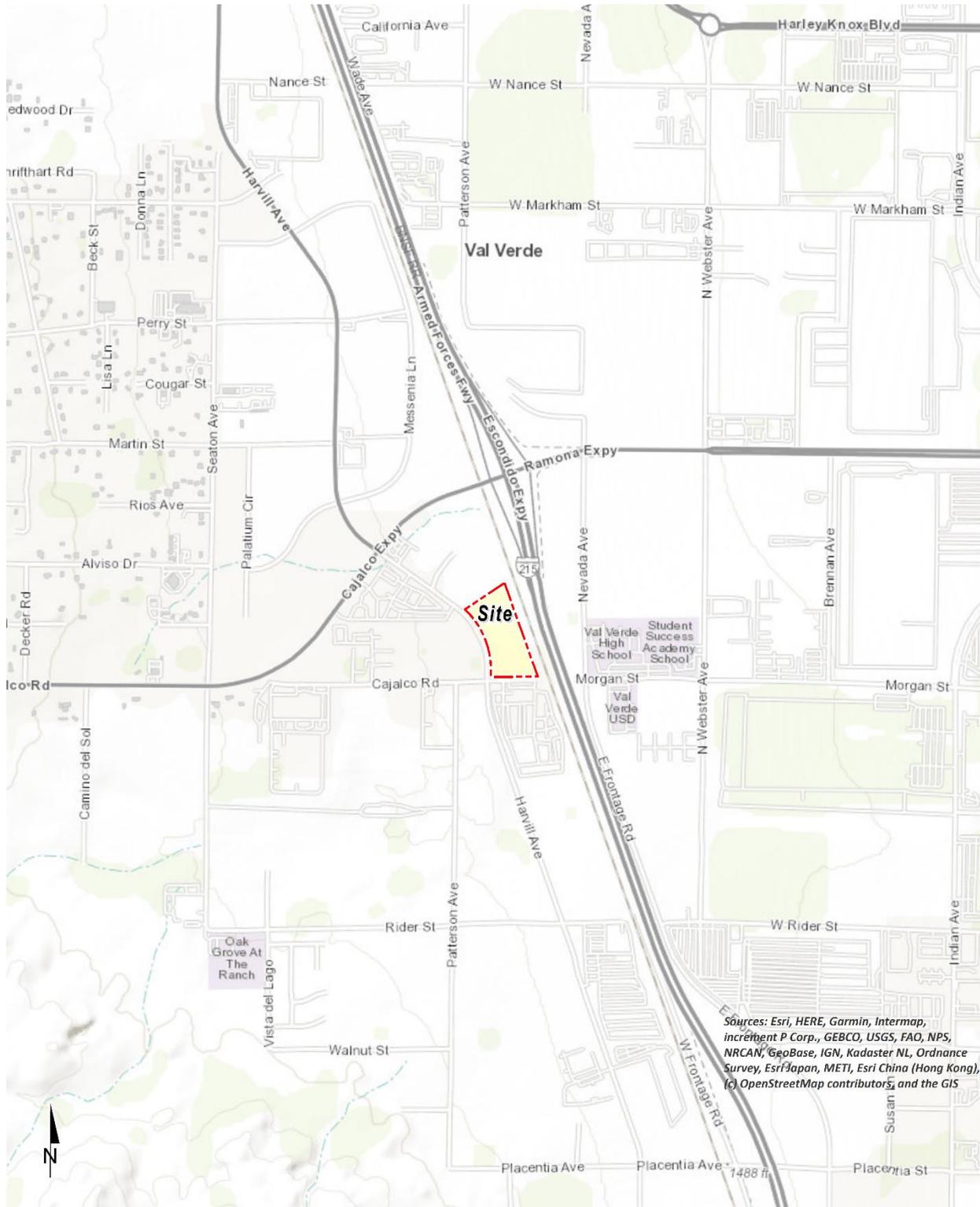
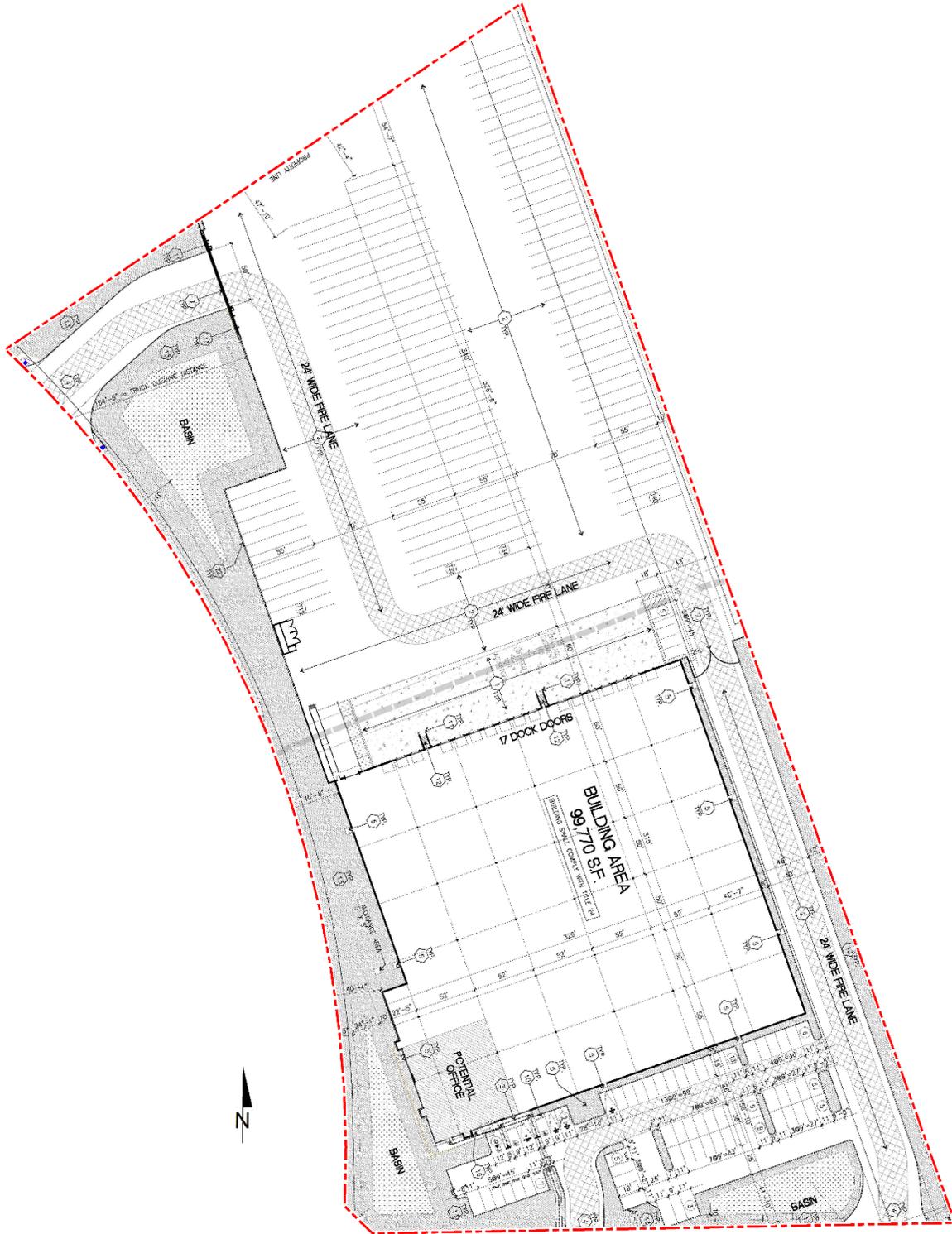


EXHIBIT 1-B: SITE PLAN



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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 2019, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates in 2021 and included (2):

- As of 2019, approximately 7,802 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2019, approximately 662 million barrels of petroleum
- As of 2019, approximately 2,144 billion cubic feet of natural gas
- As of 2019, approximately 1 million short tons of coal

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

- Gasoline demand in the transportation sector is expected to decline from approximately 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030 (3)
- Diesel demand in the transportation sector is expected to rise, increasing from approximately 3.7 billion diesel gallons in 2015 to approximately 4.7 billion in 2030 (3)
- Data from the Department of Energy states that approximately 3.9 billion gallons of diesel fuel were consumed in 2019 (4)

The most recent data provided by the EIA for energy use in California by demand sector is from 2018 and is reported as follows:

- Approximately 39.3% transportation
- Approximately 23.2% industrial
- Approximately 18.7% residential
- Approximately 18.9% commercial (5)

In 2020, total system electric generation for California was 272,576 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 190,913 GWh which accounted for approximately 70% of the electricity it uses; the rest was imported from the Pacific Northwest (15%) and the U.S. Southwest (15%) (6). Natural gas is the main source for electricity generation at 42.97% of the total in-state electric generation system power as shown in Table 2-1.

TABLE 2-1: TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2020)

Fuel Type	California In-State Generation (GWh)	% of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	% of Imports	Total California Energy Mix	Total California Power Mix
Coal	317	0.17%	194	6,963	7,157	8.76%	7,474	2.74%
Natural Gas	92,298	48.35%	70	8,654	8,724	10.68%	101,022	37.06%
Oil	30	0.02%	-	-	0	0.00%	30	0.01%
Other (Waste Heat/Petroleum Coke)	384	0.20%	125	9	134	0.16%	518	0.19%
Nuclear	16,280	8.53%	672	8,481	9,154	11.21%	25,434	9.33%
Large Hydro	17,938	9.40%	14,078	1,259	15,337	18.78%	33,275	12.21%
Unspecified	-	0.00%	12,870	1,745	14,615	17.90%	14,615	5.36%
Non-Renewable and Unspecified Totals	127,248	66.65%	28,009	27,111	55,120	67.50%	182,368	66.91%
Biomass	5,680	2.97%	975	25	1,000	1.22%	6,679	2.45%
Geothermal	11,345	5.94%	166	1,825	1,991	2.44%	13,336	4.89%
Small Hydro	3,476	1.82%	320	2	322	0.39%	3,798	1.39%
Solar	29,456	15.43%	284	6,312	6,596	8.08%	36,052	13.23%
Wind	13,708	7.18%	11,438	5,197	16,635	20.37%	30,343	11.13%
Renewable Totals	63,665	33.35%	13,184	13,359	26,543	32.50%	90,208	33.09%
<b>System Totals</b>	<b>190,913</b>	<b>100.00%</b>	<b>41,193</b>	<b>40,471</b>	<b>81,663</b>	<b>100.00%</b>	<b>272,576</b>	<b>100.00%</b>

Source: CECs 2020 Total System Electric Generation

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 (7):

- California was the seventh-largest producer of crude oil among the 50 states in 2019, and, as of January 2020, it ranked third in oil refining capacity. Foreign suppliers, led by Saudi Arabia, Iraq, Ecuador, and Colombia, provided more than half of the crude oil refined in California in 2019.
- California is the largest consumer of both jet fuel and motor gasoline among the 50 states and accounted for 17% of the nation’s jet fuel consumption and 11% of motor gasoline consumption in 2019. The state is the second-largest consumer of all petroleum products combined, accounting for 10% of the U.S. total. In 2018, California’s energy consumption was the second highest among the states, but its per capita energy consumption was the fourth-lowest due in part to its mild climate and its energy efficiency programs.
- In 2019, California was the nation’s top producer of electricity from solar, geothermal, and biomass energy and the state was second in the nation in conventional hydroelectric power generation.
- In 2019, California was the fourth largest electricity producer in the nation, but the state was also the nation’s largest importer of electricity and received about 28% of its electricity supply from generating facilities outside of California, including imports from Mexico.

As indicated above, 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.

## 2.2 ELECTRICITY

The usage associated with electricity use were calculated using CalEEMod Version 2022.1. 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 Independent Service Operator (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 (8). Similarly, the subsequent 2021 IEPR’s provides information and policy recommendations on advancing a clean, reliable, and affordable energy system.

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 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 (9).

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.

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 2018 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 (10).

Tables 2-2 identifies SCE's specific proportional shares of electricity sources in 2020. As indicated in Table 2-2, the 2020 SCE Power Mix has renewable energy at 30.9% of the overall energy resources. Geothermal resources are at 5.5%, wind power is at 9.4%, large hydroelectric sources are at 3.3%, solar energy is at 15.1%, and coal is at 0% (11).

TABLE 2-2: SCE 2020 POWER CONTENT MIX

Energy Resources	2020 SCE Power Mix
<b>Eligible Renewable</b>	<b>30.9%</b>
Biomass & Waste	0.1%
Geothermal	5.5%
Eligible Hydroelectric	0.8%
Solar	15.1%
Wind	9.4%
<b>Coal</b>	<b>0.0%</b>
<b>Large Hydroelectric</b>	<b>3.3%</b>
<b>Natural Gas</b>	<b>15.2%</b>
<b>Nuclear</b>	<b>8.4%</b>
<b>Other</b>	<b>0.3%</b>
Unspecified Sources of power*	42.0%
<b>Total</b>	<b>100%</b>

\* "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 pipeline 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." (12)*

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.

## **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 (13), and those vehicles consume an estimated 17.2 billion gallons of fuel each year<sup>1</sup>. Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

<sup>1</sup> Fuel consumptions estimated utilizing information from EMFAC2021.

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 (13). 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 10% of the nation's total consumption. The state is the largest U.S. consumer of motor gasoline and jet fuel, and 85% of the petroleum consumed in California is used in the transportation sector (14).

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 2019, about 37% of the natural gas delivered to consumers went to the state's industrial sector, and about 28% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the state's utility-scale electricity generation in 2019. The residential sector, where two-thirds of California households use natural gas for home heating, accounted for 22% of natural gas deliveries. The commercial sector received 12% of the deliveries to end users and the transportation sector consumed the remaining 1% (14).

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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)

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 21<sup>ST</sup> CENTURY (TEA-21)

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

#### 3.2 CALIFORNIA REGULATIONS

##### 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 2021 IEPR was adopted February 22, 2022, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2021 IEPR provides

the results of the CEC’s assessments of a variety of energy issues facing California. Many of these issues will require action if the state is to meet its climate, energy, air quality, and other environmental goals while maintaining reliability and controlling costs. Additionally, the 2021 IEPR provides the results of the CEC’s assessments of a variety of energy issues facing California. Many of these issues will require action if the state is to meet its climate, energy, air quality, and other environmental goals while maintaining reliability and controlling costs (15).

### **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: The California Energy Code 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. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 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 will be effective on January 1, 2023<sup>2</sup>. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made (16).

### **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.

<sup>2</sup> The 2022 California Green Building Standard Code will be published July 1, 2022.

### 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 (17).

### 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 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (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.

### 3.2.7 RIVERSIDE COUNTY CLIMATE ACTION PLAN

The Project is subject to the Riverside County Climate Action Plan (CAP), as shown in the Project's Greenhouse Gas Analysis, the Project would comply with the County's CAP and result in a less than significant impact. The County's CAP is intended to reduce energy consumption through increasing energy efficiency and using alternative sustainable sources of energy. The Project does not conflict with any applicable CAP measures.

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## 4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

### 4.1 EVALUATION CRITERIA

Appendix F of the *State CEQA Guidelines* (18), 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* (19), 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 outputs for the *BCI IV Harvill Industrial Center (PPT220001) Air Quality Impact Analysis (AQIA)* (20) was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands.

#### 4.2.1 CAL EEMOD

In May 2022, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the CalEEMod Version 2022.1. 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 (21). 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 through 4.2.

#### 4.2.2 EMISSION FACTORS MODEL

On May 2, 2022, the EPA approved the 2021 version of the EMISSIONS FACTOR model (EMFAC2021) 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 (22). 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

analysis, the 2023 and 2024 analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Outputs from the EMFAC2021 model run is provided in Appendix 4.3.

### 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.

#### CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in February 2023 and would last through January 2024 (20). The construction schedule utilized in the analysis, shown in Table 4-1, represents a “worst-case” analysis scenario. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (23).

**TABLE 4-1: CONSTRUCTION DURATION**

Construction Activity	Start Date	End Date	Days
Site Preparation	02/01/2023	02/21/2023	15
Grading	02/21/2023	03/31/2023	29
Building Construction	04/01/2023	09/30/2023	130
Paving	04/01/2023	11/30/2023	174
Architectural Coating	12/01/2023	01/31/2024	44

#### PROJECT CONSTRUCTION POWER COST

The *2022 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of \$2.41, which was used to calculate the Project’s total construction power cost (24).

As shown on Table 4-2, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately \$10,538.20.

**TABLE 4-2: CONSTRUCTION POWER COST**

Land Use	Power Cost (per 1,000 SF of construction per month)	Size (1,000 SF)	Construction Duration (months)	Project Construction Power Cost
General Light Industrial	\$2.41	99.770	11	\$2,644.90
Truck Trailer Yard	\$2.41	73.150	11	\$1,939.21
Parking	\$2.41	11.934	11	\$316.37
Landscape	\$2.41	57.883	11	\$1,534.48
Other Asphalt Surfaces	\$2.41	154.781	11	\$4,103.24
<b>CONSTRUCTION POWER COST</b>				<b>\$10,538.20</b>

#### 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 4-2) by the utility provider cost per kilowatt hour (kWh) of electricity.

#### PROJECT CONSTRUCTION ELECTRICITY USAGE

The SCE's general service rate schedule were used to determine the Project's electrical usage. As of June 1, 2022, SCE's general service rate is \$0.13 per kilowatt hours (kWh) of electricity for industrial services (25). As shown on Table 4-3, the total electricity usage from on-site Project construction related activities is estimated to be approximately 79,408 kWh.

**TABLE 4-3: CONSTRUCTION ELECTRICITY USAGE**

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
General Light Industrial	\$0.13	19,930
Truck Trailer Yard	\$0.13	14,612
Parking	\$0.13	2,384
Landscape	\$0.13	11,563
Other Asphalt Surfaces	\$0.13	30,919
<b>CONSTRUCTION ELECTRICITY USAGE</b>		<b>79,408</b>

#### 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.

#### CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 4-4 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.

**TABLE 4-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS**

Construction Activity	Equipment	Amount	Hours Per Day
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Graders	1	8
	Excavators	1	8
	Crawler Tractors	3	8
	Rubber Tired Dozers	1	8
	Scrapers	3	8
Building Construction	Forklifts	5	8
	Generator Sets	2	8
	Cranes	2	8
	Welders	2	8
	Crawler Tractors	5	8
Pavers	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

**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 (26). 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 commercial fuel providers serving the Project area and region<sup>3</sup>. As presented in Table 4-5, Project construction activities would consume an estimated 58,568 gallons of diesel fuel. Project construction would represent a “single-event” diesel fuel demand and would not require ongoing or permanent commitment of diesel fuel resources for this purpose.

<sup>3</sup> 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

Phase Name	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption
Site Preparation	15	Crawler Tractors	87	4	8	0.43	1,197	971
		Rubber Tired Dozers	367	3	8	0.40	3,523	2,857
Grading	29	Crawler Tractors	87	3	8	0.43	898	1,407
		Graders	148	1	8	0.41	485	761
		Excavators	36	1	8	0.38	109	172
		Rubber Tired Dozers	367	1	8	0.40	1,174	1,841
		Scrapers	423	3	8	0.48	4,873	7,639
Building Construction	130	Crawler Tractors	87	5	8	0.43	1,496	10,515
		Forklifts	82	5	8	0.20	656	4,610
		Generator Sets	14	2	8	0.74	166	1,165
		Cranes	367	2	8	0.29	1,703	11,966
		Welders	46	2	8	0.45	331	2,327
Paving	174	Pavers	81	2	8	0.42	544	5,120
		Paving Equipment	89	2	8	0.36	513	4,822
		Rollers	36	2	8	0.38	219	2,059
Architectural Coating	44	Air Compressors	37	1	8	0.48	142	338
<b>CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)</b>								<b>58,568</b>

#### 4.3.4 CONSTRUCTION TRIPS AND VMT

Construction generates on-road vehicle emissions from vehicle usage for workers and vendors commuting to and from the site. The number of workers 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 would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

**TABLE 4-6: CONSTRUCTION TRIPS AND VMT**

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Site Preparation	18	2	0
Grading	23	3	8
Building Construction	42	12	0
Paving	15	0	0
Architectural Coating	8	0	0

#### 4.3.5 CONSTRUCTION WORKER FUEL ESTIMATES

With respect to estimated VMT for the Project, the construction worker trips (personal vehicles used by workers commuting to the Project from home) would generate an estimated 179,580 VMT during the 11 months of construction (20). Based on CalEEMod methodology, it is assumed that 50% of all construction worker trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1<sup>4</sup>), and 25% are from light-duty-trucks (LDT2<sup>5</sup>). 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 (22). EMFAC2021 was run for the LDA, LDT1, and LDT2 vehicle class within the California sub-area for the 2023 and 2024 calendar years. Data from EMFAC2021 is shown in Appendix 4.3.

As shown in Table 4-7, the estimated annual fuel consumption resulting from Project construction worker trips is 6,682 gallons 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 ongoing or permanent commitment of fuel resources for this purpose.

<sup>4</sup> 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.

<sup>5</sup> 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: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES**

Year	Construction Activity	Duration (Days)	Worker Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2023	LDA						
	Site Preparation	15	9	18.5	2,498	30.60	82
	Grading	29	12	18.5	6,438	30.60	210
	Building Construction	130	21	18.5	50,505	30.60	1,650
	Paving	174	8	18.5	25,752	30.60	842
	Architectural Coating	21	4	18.5	1,554	30.60	51
	LDT1						
	Site Preparation	15	5	18.5	1,388	24.15	57
	Grading	29	6	18.5	3,219	24.15	133
	Building Construction	130	11	18.5	26,455	24.15	1,095
	Paving	174	4	18.5	12,876	24.15	533
	Architectural Coating	21	2	18.5	777	24.15	32
	LDT2						
	Site Preparation	15	5	18.5	1,388	23.88	58
	Grading	29	6	18.5	3,219	23.88	135
	Building Construction	130	11	18.5	26,455	23.88	1,108
	Paving	174	4	18.5	12,876	23.88	539
	Architectural Coating	21	2	18.5	777	23.88	33
2024	LDA						
	Architectural Coating	23	4	18.5	1,702	31.51	54
	LDT1						
	Architectural Coating	23	2	18.5	851	24.62	35
	LDT2						
Architectural Coating	23	2	18.5	851	24.57	35	
<b>TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION</b>							<b>6,682</b>

**4.3.6 CONSTRUCTION VENDOR FUEL ESTIMATES**

With respect to estimated VMT, the construction vendor trips (vehicles that deliver materials to the site during construction) would generate an estimated 22,041 VMT along area roadways for the Project over the duration of construction activity (20). It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHD) and 50% are from heavy-heavy duty trucks (HHD). These assumptions are consistent with the CalEEMod defaults utilized within the within the AQIA (20). Vehicle fuel efficiencies for MHDs and HHDs were estimated using information generated within EMFAC2021. EMFAC2021 was run for the MHD and HHD vehicle classes within the California sub-area for the 2023 and 2024 calendar years. Data from EMFAC2021 is shown in Appendix 4.3.

Based on Table 4-8, it is estimated that 3,244 gallons of fuel will be consumed related to construction vendor trips during full construction of the Project. It should be noted that Project construction vendor trips would represent a “single-event” diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

**TABLE 4-8: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES**

Year	Construction Activity	Duration (Days)	Vendor Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2023	MHD						
	Site Preparation	15	1	10.2	153	8.40	18
	Grading	29	2	10.2	592	8.40	70
	Building Construction	130	6	10.2	7,956	8.40	947
	HHD (Vendor)						
	Site Preparation	15	1	10.2	153	6.04	25
	Grading	29	2	10.2	592	6.04	98
	Building Construction	130	6	10.2	7,956	6.04	1,317
	HHD (Hauling)						
	Grading	29	8	20	4,640	6.04	768
<b>TOTAL CONSTRUCTION VENDOR FUEL CONSUMPTION</b>							<b>3,244</b>

**4.3.7 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.

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

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

#### **4.4 OPERATIONAL ENERGY DEMANDS**

Energy consumption in support of or related to Project operations would include transportation fuel demands (fuel consumed by passenger car and truck vehicles accessing the Project site), fuel demands from operational equipment, and facilities energy demands (energy consumed by building operations and site maintenance activities).

#### 4.4.1 TRANSPORTATION FUEL 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 vendor trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2021 developed by CARB (22). EMFAC2021 was run for the Riverside County area for the 2024 calendar year. Data from EMFAC2021 is shown in Appendix 4.3.

As summarized on Table 4-9 and 4-10 the Project would result in 2,791,244 annual VMT and an estimated annual fuel consumption of 160,544 gallons of fuel in Option A and 1,365,237 annual VMT and 120,691 gallons of fuel in Option B.

**TABLE 4-9: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION (OPTION A)**

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual VMT	Estimated Annual Fuel Consumption (gallons)
LDA	31.51	1,251,336	39,717
LDT1	24.62	101,435	4,120
LDT2	24.57	497,527	20,247
MDV	15.52	343,354	22,129
MCY	15.52	56,104	3,616
LHD1	16.16	77,804	4,814
LHD2	15.52	21,996	1,418
MHD	8.47	169,256	19,975
HHD	6.12	272,430	44,508
<b>TOTAL (ALL VEHICLES)</b>		<b>2,791,244</b>	<b>160,544</b>

**TABLE 4-10: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION (OPTION B)**

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual VMT	Estimated Annual Fuel Consumption (gallons)
LDA	31.51	352,396	11,185
LDT1	24.62	28,545	1,159
LDT2	24.57	140,008	5,698
MDV	15.52	96,623	6,227
MCY	15.52	13,949	899
LHD1	16.16	104,214	4,814
LHD2	15.52	29,446	1,898
MHD	8.47	203,344	23,998
HHD	6.12	396,712	64,813
<b>TOTAL (ALL VEHICLES)</b>		<b>1,365,237</b>	<b>120,691</b>

#### 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 tractor operating at 4 hours a day<sup>6</sup> 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 2024 operational year and was used to derive the total annual fuel consumption associated on-site equipment. As presented in Table 4-11, Project on-site equipment would consume an estimated 4,642 gallons of natural gas.

**TABLE 4-11: 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 - Port Tractor	1	4	365	17,909	5,633	4,642
<b>ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMAND (GALLONS FUEL)</b>						<b>4,642</b>

#### 4.4.3 FACILITY ENERGY DEMANDS

Project building operations activities would result in the consumption of natural gas and electricity, which would be supplied to the Project by SCE and SoCalGas. Annual natural gas and electricity demands for Option A and B, are summarized in Tables 4-12 and 4-13. As summarized on Tables 4-12 and 4-13 the Project would result in 4,285,154 kBTU/year of natural gas and 1,135,162 kWh/year of electricity for Option A and 1,904,827 kBTU/year of natural gas and 533,586 kWh/year of electricity for Option B.

**TABLE 4-12: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY (OPTION A)**

Land Use	Natural Gas Demand (kBTU/year)	Electricity Demand (kWh/year)
General Light Industrial	4,285,154	954,706
Truck Trailer Yard	0	116,508
Parking	0	63,948
Landscape	0	0
Other Asphalt Surfaces	0	0
<b>TOTAL PROJECT ENERGY DEMAND</b>	<b>4,285,154</b>	<b>1,135,162</b>

<sup>6</sup> 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.

**TABLE 4-13: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY (OPTION B)**

Land Use	Natural Gas Demand (kBtu/year)	Electricity Demand (kWh/year)
Warehousing	1,904,827	459,177
Truck Trailer Yard	0	10,303
Parking	0	64,106
Landscape	0	0
Other Asphalt Surfaces	0	0
<b>TOTAL PROJECT ENERGY DEMAND</b>	<b>1,904,827</b>	<b>533,586</b>

#### 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., Title24, California Green Building 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 \$10,538.20. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project buildout, is calculated to be approximately 79,408 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 58,568 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 6,682 gallons of fuel. Additionally, fuel consumption from construction vendor trips (MHDs and HHDs) will total approximately 3,244 gallons. 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 2021 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 (15). As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

#### **4.5.2 OPERATIONAL ENERGY DEMANDS**

##### **TRANSPORTATION ENERGY DEMANDS**

Annual vehicular trips and related VMT generated by the operation of the Project would result in a fuel demand of 160,544 gallons of fuel for Option A and 120,691 gallons of fuel for Option B.

Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other industrial 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 other industrial 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.

Heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The first battery-electric heavy-heavy duty trucks are being tested this year and SCAQMD is looking to integrate this new technology into large-scale truck operations. The following state strategies reduce GHG emissions from the medium and heavy-duty trucks:

- CARB's Mobile Source Strategy focuses on reducing GHGs through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks.

- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25% by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions.
- CARB's On-Road Truck and Bus Regulation (2010) requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent (27).
- CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated GHG emissions.

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 is strategically located in a region that is intended to serve existing and future logistics demand. Further, as required by the California Green Building Standards Code and County requirements, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

#### **ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMANDS**

As previously stated, it is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. On-site cargo handling equipment used by the Project would result in approximately 4,642 gallons of natural gas. On-site equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed operations that are unusual or energy-intensive, and Project on-site equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

#### **FACILITY ENERGY DEMANDS**

Project facility operational energy demands are estimated at: 4,285,154 kBtu/year of natural gas and 1,135,162 kWh/year of electricity for Option A and 1,904,827 kBtu/year of natural gas and 533,586 kWh/year of electricity for Option B. Natural gas would be supplied to the Project by

SoCalGas; 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 industrial 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?***

As supported by the preceding analyses, Project construction and operations would not result in the inefficient, wasteful, or unnecessary consumption of energy. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

### 5.2 ENERGY IMPACT 2

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

The Project's consistency with the applicable state and local plans is discussed below.

#### **CONSISTENCY WITH ISTE A**

Transportation and access to the Project site is provided by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTE A because SCAG is not planning for intermodal facilities on or through the Project site.

#### **CONSISTENCY WITH TEA-21**

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

#### **CONSISTENCY WITH IEPR**

Electricity would be provided to the Project by SCE. SCE's *Clean Power and Electrification Pathway* (CPEP) white paper builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation the goals presented in the 2021 IEPR.

Additionally, the Project will comply with the applicable Title 24 standards which would ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary. As such, development of the proposed Project would support the goals presented in the 2020 IEPR.

**CONSISTENCY WITH STATE OF CALIFORNIA ENERGY PLAN**

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access and takes advantage of existing infrastructure systems. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with or obstruct, implementation of the State of California Energy Plan.

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

The 2022 version of Title 24 was adopted by the CEC and will become effective on January 1, 2023. As the Project building construction is anticipated in 2023, it is presumed that the Project would be required to comply with the Title 24 standards in place at that time. Therefore, the Project is would not result in a significant impact on energy resources (16). The proposed Project would be subject to Title 24 standards.

**CONSISTENCY WITH CALIFORNIA CODE TITLE 24, PART 11, CALGREEN**

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 will become 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.

**CONSISTENCY WITH AB 1493**

AB 1493 is not applicable to the Project as it is a statewide measure establishing vehicle emissions standards. No feature of the Project would interfere with implementation of the requirements under AB 1493.

**CONSISTENCY WITH RPS**

California's RPS is not applicable to the Project as it is a statewide measure that establishes a renewable energy mix. No feature of the Project would interfere with implementation of the requirements under RPS.

**CONSISTENCY WITH SB 350**

The proposed Project would use energy from SCE, which have committed to diversify their portfolio of energy sources by increasing energy from wind and solar sources. No feature of the Project would interfere with implementation of SB 350. Additionally, the Project would be designed and constructed to implement the energy efficiency measures for new industrial developments and would include several measures designed to reduce energy consumption.

As shown above, the Project would not conflict with any of the state or local plans. As such, a less than significant impact is expected.

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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 BCI IV Harvill Industrial Center. 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](mailto: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 Planners  
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  
Air Dispersion Modeling – Lakes Environmental • June 2006

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## **APPENDIX 4.1:**

### **CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS**

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# BCI IV Harvill Industrial Center (Construction - Unmitigated) Custom Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	BCI IV Harvill Industrial Center (Construction - Unmitigated)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.84106820160365, -117.25207278942537
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5479
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

## 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
General Heavy Industry	99.8	1000sqft	3.62	99,770	57,883	0.00	—	—
Parking Lot	73.0	Space	0.27	0.00	0.00	0.00	—	Standard Parking
Parking Lot	133	Space	1.68	0.00	0.00	0.00	—	Trailer Parking

Other Asphalt Surfaces	155	1000sqft	3.55	0.00	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.	5.79	4.96	41.4	44.1	0.07	2.40	0.85	3.25	2.21	0.20	2.42	—	7,836	7,836	0.31	0.14	4.64	7,890
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.4	13.0	100	81.5	0.14	5.05	9.47	14.5	4.65	3.89	8.53	—	15,626	15,626	0.62	0.25	0.11	15,716
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.97	3.31	22.0	21.8	0.03	1.21	0.86	2.07	1.12	0.28	1.40	—	4,013	4,013	0.16	0.07	0.90	4,038
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.54	0.60	4.01	3.97	0.01	0.22	0.16	0.38	0.20	0.05	0.26	—	664	664	0.03	0.01	0.15	669

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	5.79	4.96	41.4	44.1	0.07	2.40	0.85	3.25	2.21	0.20	2.42	—	7,836	7,836	0.31	0.14	4.64	7,890
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	12.4	13.0	100	81.5	0.14	5.05	9.47	14.5	4.65	3.89	8.53	—	15,626	15,626	0.62	0.25	0.11	15,716
2024	0.22	13.0	1.21	1.53	< 0.005	0.04	0.10	0.14	0.04	0.02	0.06	—	178	178	0.01	< 0.005	—	179
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.97	3.31	22.0	21.8	0.03	1.21	0.86	2.07	1.12	0.28	1.40	—	4,013	4,013	0.16	0.07	0.90	4,038
2024	0.01	0.79	0.07	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.54	0.60	4.01	3.97	0.01	0.22	0.16	0.38	0.20	0.05	0.26	—	664	664	0.03	0.01	0.15	669
2024	< 0.005	0.14	0.01	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	—	1.79

### 3. Construction Emissions Details

#### 3.1. Site Preparation (2023) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.83	4.90	47.0	38.0	0.05	2.53	—	2.53	2.33	—	2.33	—	5,530	5,530	0.22	0.04	—	5,549

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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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.93	1.56	< 0.005	0.10	—	0.10	0.10	—	0.10	—	227	227	0.01	< 0.005	—	228
Dust From Material Movement:	—	—	—	—	—	—	0.23	0.23	—	0.11	0.11	—	—	—	—	—	—	—
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	0.35	0.28	< 0.005	0.02	—	0.02	0.02	—	0.02	—	37.6	37.6	< 0.005	< 0.005	—	37.8
Dust From Material Movement:	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.24	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	243	243	0.01	0.01	0.03	246
Vendor	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	62.9	62.9	< 0.005	0.01	< 0.005	65.7
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	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	10.1	10.1	< 0.005	< 0.005	0.02	10.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.58	2.58	< 0.005	< 0.005	< 0.005	2.70
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	0.00	0.00	—	1.67	1.67	< 0.005	< 0.005	< 0.005	1.70
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.43	0.43	< 0.005	< 0.005	< 0.005	0.45
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

### 3.3. Grading (2023) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.30	5.30	52.0	40.5	0.08	2.51	—	2.51	2.30	—	2.30	—	8,817	8,817	0.36	0.07	—	8,848
Dust From Material Movement	—	—	—	—	—	—	3.08	3.08	—	1.02	1.02	—	—	—	—	—	—	—
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	0.50	0.42	4.13	3.22	0.01	0.20	—	0.20	0.18	—	0.18	—	701	701	0.03	0.01	—	703

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Dust From Material Movement:	—	—	—	—	—	—	0.24	0.24	—	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	0.09	0.08	0.75	0.59	< 0.005	0.04	—	0.04	0.03	—	0.03	—	116	116	< 0.005	< 0.005	—	116
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.14	1.58	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	310	310	0.01	0.01	0.04	314
Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	94.3	94.3	< 0.005	0.01	0.01	98.5
Hauling	0.02	0.01	0.68	0.16	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	568	568	0.01	0.09	0.03	596
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	25.0	25.0	< 0.005	< 0.005	0.05	25.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.49	7.49	< 0.005	< 0.005	0.01	7.83
Hauling	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	45.1	45.1	< 0.005	0.01	0.04	47.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	4.14	4.14	< 0.005	< 0.005	0.01	4.19
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.24	1.24	< 0.005	< 0.005	< 0.005	1.30

Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.47	7.47	< 0.005	< 0.005	0.01	7.84
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### 3.5. Building Construction (2023) - 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	4.40	3.69	32.6	28.8	0.05	1.99	—	1.99	1.83	—	1.83	—	5,110	5,110	0.21	0.04	—	5,128
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	1.57	1.31	11.6	10.2	0.02	0.71	—	0.71	0.65	—	0.65	—	1,820	1,820	0.07	0.01	—	1,826
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	0.29	0.24	2.12	1.87	< 0.005	0.13	—	0.13	0.12	—	0.12	—	301	301	0.01	< 0.005	—	302
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	0.25	0.22	0.22	3.81	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	617	617	0.03	0.02	2.65	627

Vendor	0.02	0.01	0.44	0.14	< 0.005	0.01	0.02	0.03	0.01	0.01	0.01	—	377	377	0.01	0.06	1.05	395
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	0.08	0.08	0.09	1.08	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	205	205	0.01	0.01	0.41	207
Vendor	0.01	< 0.005	0.17	0.05	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	134	134	< 0.005	0.02	0.16	140
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	0.02	0.01	0.02	0.20	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	33.9	33.9	< 0.005	< 0.005	0.07	34.3
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	22.2	22.2	< 0.005	< 0.005	0.03	23.3
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

### 3.7. Paving (2023) - 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	1.04	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	1.04	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.42	3.84	4.78	0.01	0.20	—	0.20	0.18	—	0.18	—	721	721	0.03	0.01	—	723
Paving	—	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	0.09	0.08	0.70	0.87	< 0.005	0.04	—	0.04	0.03	—	0.03	—	119	119	< 0.005	< 0.005	—	120
Paving	—	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	0.01	0.01	0.00	0.00	0.00	—	220	220	0.01	0.01	0.94	224
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.09	1.03	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	202	202	0.01	0.01	0.02	205
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.52	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	97.8	97.8	< 0.005	< 0.005	0.19	99.1
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	0.01	0.01	0.01	0.09	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	16.2	16.2	< 0.005	< 0.005	0.03	16.4
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

### 3.9. Architectural Coating (2023) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.25	1.54	< 0.005	0.05	—	0.05	0.05	—	0.05	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	12.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	0.01	0.08	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8

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Architect Coatings	—	0.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.79	1.79	< 0.005	< 0.005	—	1.79
Architect ural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.55	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	108	108	0.01	< 0.005	0.01	109
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	6.63	6.63	< 0.005	< 0.005	0.01	6.73
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	0.00	0.00	—	1.10	1.10	< 0.005	< 0.005	< 0.005	1.11
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

### 3.11. Architectural Coating (2024) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.21	1.53	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architect ural Coatings	—	12.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.8	10.8	< 0.005	< 0.005	—	10.8
Architect ural Coatings	—	0.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.79	1.79	< 0.005	< 0.005	—	1.79
Architect ural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

## 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Site Preparation	Site Preparation	2/1/2023	2/21/2023	5.00	15.0	—
Grading	Grading	2/21/2023	3/31/2023	5.00	29.0	—
Building Construction	Building Construction	4/1/2023	9/30/2023	5.00	130	—
Paving	Paving	4/1/2023	11/30/2023	5.00	174	—
Architectural Coating	Architectural Coating	12/1/2023	1/31/2024	5.00	44.0	—

### 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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	5.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	87.0	0.43
Grading	Crawler Tractors	Diesel	Average	3.00	8.00	87.0	0.43
Building Construction	Crawler Tractors	Diesel	Average	5.00	8.00	87.0	0.43
Grading	Scrapers	Diesel	Average	3.00	8.00	423	0.48

## 5.3. Construction Vehicles

## 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	18.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT

Site Preparation	Onsite truck	0.00	0.00	HHDT
Grading	—	—	—	—
Grading	Worker	23.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	3.00	10.2	HHDT,MHDT
Grading	Hauling	8.00	20.0	HHDT
Grading	Onsite truck	0.00	0.00	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	42.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	12.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	0.00	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	0.00	0.00	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	8.00	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	0.00	0.00	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	160,443	53,481	14,383

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	52.5	0.00	—
Grading	1,755	0.00	160	0.00	—
Paving	0.00	0.00	0.00	0.00	5.50

### 5.6.2. Construction Earthmoving Control Strategies

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

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%
Parking Lot	0.27	100%
Parking Lot	1.68	100%
Other Asphalt Surfaces	3.55	100%

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
------	--------------	-----	-----	-----

2023	0.00	532	0.03	< 0.005
2024	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)
-----------	--------	------------------------------	------------------------------

## 8. User Changes to Default Data

Screen	Justification
Land Use	Total Project area is 9.13 acres
Construction: Construction Phases	Construction anticipated to begin February 1, 2023 and end January 31, 2024
Construction: Off-Road Equipment	Equipment based on equipment used for construction of similar projects
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction

Construction: Architectural Coatings

Rule 1113

## **APPENDIX 4.2:**

### **CALEEMOD OPERATIONS EMISSIONS MODEL OUTPUTS**

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# BCI IV Harvill Industrial Center (Operations) Custom Report

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5.18.2.1. Unmitigated

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	BCI IV Harvill Industrial Center (Operations)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.84106820160365, -117.25207278942537
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5479
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

## 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
General Heavy Industry	99.8	1000sqft	3.62	99,770	57,883	0.00	—	Passenger Cars
Parking Lot	73.0	Space	0.27	0.00	0.00	0.00	—	Standard Parking
Parking Lot	133	Space	1.68	0.00	0.00	0.00	—	Trailer Parking

Other Asphalt Surfaces	155	1000sqft	3.55	0.00	0.00	0.00	—	—
User Defined Industrial	99.8	User Defined Unit	0.00	0.00	0.00	0.00	—	Trucks
User Defined Parking	133	User Defined Unit	0.00	0.00	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.	3.48	5.47	8.77	36.5	0.12	0.21	3.10	3.31	0.21	0.58	0.78	111	14,529	14,640	11.7	1.10	130	15,391
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.61	4.66	9.17	26.5	0.12	0.20	3.10	3.30	0.20	0.58	0.78	111	14,025	14,136	11.7	1.11	88.6	14,849
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.46	4.56	7.12	23.4	0.09	0.18	2.27	2.44	0.17	0.42	0.60	111	11,021	11,132	11.7	0.85	101	11,777
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	0.83	1.30	4.26	0.02	0.03	0.41	0.45	0.03	0.08	0.11	18.4	1,825	1,843	1.93	0.14	16.7	1,950

### 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	2.59	2.25	7.59	31.2	0.11	0.12	3.10	3.22	0.11	0.58	0.69	—	11,899	11,899	0.29	0.97	42.5	12,239
Area	0.77	3.16	0.04	4.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.8	17.8	< 0.005	< 0.005	—	17.9
Energy	0.13	0.06	1.15	0.97	0.01	0.09	—	0.09	0.09	—	0.09	—	2,458	2,458	0.22	0.02	—	2,468
Water	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
Waste	—	—	—	—	—	—	—	—	—	—	—	66.7	0.00	66.7	6.66	0.00	—	233
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.5	87.5
Total	3.48	5.47	8.77	36.5	0.12	0.21	3.10	3.31	0.21	0.58	0.78	111	14,529	14,640	11.7	1.10	130	15,391
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.48	2.15	8.02	25.6	0.11	0.12	3.10	3.22	0.11	0.58	0.69	—	11,413	11,413	0.30	0.99	1.10	11,716
Area	—	2.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.13	0.06	1.15	0.97	0.01	0.09	—	0.09	0.09	—	0.09	—	2,458	2,458	0.22	0.02	—	2,468
Water	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
Waste	—	—	—	—	—	—	—	—	—	—	—	66.7	0.00	66.7	6.66	0.00	—	233
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.5	87.5
Total	2.61	4.66	9.17	26.5	0.12	0.20	3.10	3.30	0.20	0.58	0.78	111	14,025	14,136	11.7	1.11	88.6	14,849
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.81	1.56	5.94	19.4	0.08	0.09	2.27	2.35	0.08	0.42	0.50	—	8,396	8,396	0.22	0.72	13.4	8,631
Area	0.53	2.93	0.03	2.97	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	12.2	12.2	< 0.005	< 0.005	—	12.3
Energy	0.13	0.06	1.15	0.97	0.01	0.09	—	0.09	0.09	—	0.09	—	2,458	2,458	0.22	0.02	—	2,468
Water	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
Waste	—	—	—	—	—	—	—	—	—	—	—	66.7	0.00	66.7	6.66	0.00	—	233

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.5	87.5
Total	2.46	4.56	7.12	23.4	0.09	0.18	2.27	2.44	0.17	0.42	0.60	111	11,021	11,132	11.7	0.85	101	11,777
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.33	0.29	1.08	3.54	0.01	0.02	0.41	0.43	0.01	0.08	0.09	—	1,390	1,390	0.04	0.12	2.22	1,429
Area	0.10	0.53	< 0.005	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.02	2.02	< 0.005	< 0.005	—	2.03
Energy	0.02	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	407	407	0.04	< 0.005	—	409
Water	—	—	—	—	—	—	—	—	—	—	—	7.32	25.6	32.9	0.75	0.02	—	57.2
Waste	—	—	—	—	—	—	—	—	—	—	—	11.0	0.00	11.0	1.10	0.00	—	38.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.5	14.5
Total	0.45	0.83	1.30	4.26	0.02	0.03	0.41	0.45	0.03	0.08	0.11	18.4	1,825	1,843	1.93	0.14	16.7	1,950

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	2.19	1.98	1.38	27.8	0.06	0.03	0.27	0.30	0.02	0.08	0.10	—	5,961	5,961	0.19	0.14	23.7	6,031
Parking Lot	0.11	0.10	0.07	1.45	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	310	310	0.01	0.01	1.23	313
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

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User Defined Industrial	0.07	0.04	1.70	0.50	0.01	0.03	0.11	0.13	0.02	0.04	0.06	—	1,549	1,549	0.03	0.23	4.46	1,623
User Defined Parking	0.21	0.13	4.43	1.45	0.04	0.06	0.29	0.35	0.06	0.09	0.15	—	4,079	4,079	0.07	0.60	13.1	4,272
Total	2.59	2.25	7.59	31.2	0.11	0.12	0.68	0.80	0.11	0.21	0.32	—	11,899	11,899	0.29	0.97	42.5	12,239
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	2.10	1.89	1.54	22.4	0.05	0.03	0.27	0.30	0.02	0.08	0.10	—	5,497	5,497	0.20	0.15	0.61	5,547
Parking Lot	0.11	0.10	0.08	1.17	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	286	286	0.01	0.01	0.03	288
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
User Defined Industrial	0.07	0.04	1.77	0.51	0.01	0.03	0.11	0.13	0.02	0.04	0.06	—	1,549	1,549	0.03	0.23	0.12	1,620
User Defined Parking	0.20	0.12	4.63	1.46	0.04	0.06	0.29	0.35	0.06	0.09	0.15	—	4,081	4,081	0.06	0.60	0.34	4,261
Total	2.48	2.15	8.02	25.6	0.11	0.12	0.68	0.80	0.11	0.21	0.32	—	11,413	11,413	0.30	0.99	1.10	11,716
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.28	0.25	0.21	3.12	0.01	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	674	674	0.02	0.02	1.24	681
Parking Lot	0.01	0.01	0.01	0.16	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	35.0	35.0	< 0.005	< 0.005	0.06	35.4
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

User Defined Industrial	0.01	0.01	0.24	0.07	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	188	188	< 0.005	0.03	0.23	196
User Defined Parking	0.03	0.02	0.62	0.19	0.01	0.01	0.04	0.05	0.01	0.01	0.02	—	494	494	0.01	0.07	0.68	516
Total	0.33	0.29	1.08	3.54	0.01	0.02	0.09	0.11	0.01	0.03	0.04	—	1,390	1,390	0.04	0.12	2.22	1,429

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	912	912	0.09	0.01	—	917
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	172	172	0.02	< 0.005	—	173
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,084	1,084	0.10	0.01	—	1,091

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	912	912	0.09	0.01	—	917
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	172	172	0.02	< 0.005	—	173
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,084	1,084	0.10	0.01	—	1,091
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	151	151	0.01	< 0.005	—	152
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	28.5	28.5	< 0.005	< 0.005	—	28.7
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	180	180	0.02	< 0.005	—	181

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.13	0.06	1.15	0.97	0.01	0.09	—	0.09	0.09	—	0.09	—	1,373	1,373	0.12	< 0.005	—	1,377
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
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
User Defined Parking	0.00	0.00	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	0.13	0.06	1.15	0.97	0.01	0.09	—	0.09	0.09	—	0.09	—	1,373	1,373	0.12	< 0.005	—	1,377
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.13	0.06	1.15	0.97	0.01	0.09	—	0.09	0.09	—	0.09	—	1,373	1,373	0.12	< 0.005	—	1,377
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

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
User Defined Parking	0.00	0.00	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	0.13	0.06	1.15	0.97	0.01	0.09	—	0.09	0.09	—	0.09	—	1,373	1,373	0.12	< 0.005	—	1,377
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.02	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	227	227	0.02	< 0.005	—	228
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
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
User Defined Parking	0.00	0.00	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	0.02	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	227	227	0.02	< 0.005	—	228

### 4.3. Area Emissions by Source

#### 4.3.2. 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	—	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.77	0.71	0.04	4.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.8	17.8	< 0.005	< 0.005	—	17.9
Total	0.77	3.16	0.04	4.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.8	17.8	< 0.005	< 0.005	—	17.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	25.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	28.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.10	0.09	< 0.005	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.02	2.02	< 0.005	< 0.005	—	2.03
Total	0.10	0.82	< 0.005	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.02	2.02	< 0.005	< 0.005	—	2.03

#### 4.4. Water Emissions by Land Use

## 4.4.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
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

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	7.32	25.6	32.9	0.75	0.02	—	57.2
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.32	25.6	32.9	0.75	0.02	—	57.2

### 4.5. Waste Emissions by Land Use

#### 4.5.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	66.7	0.00	66.7	6.66	0.00	—	233
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	66.7	0.00	66.7	6.66	0.00	—	233
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	66.7	0.00	66.7	6.66	0.00	—	233
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	66.7	0.00	66.7	6.66	0.00	—	233
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	11.0	0.00	11.0	1.10	0.00	—	38.6
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	11.0	0.00	11.0	1.10	0.00	—	38.6

#### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.5	87.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.5	87.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.5	87.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.5	87.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.5	14.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.5	14.5

### 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)

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

### 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)

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

### 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
General Heavy Industry	457	38.7	15.5	122,072	7,993	676	270	2,133,295
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	23.8	2.01	0.80	6,343	415	35.2	14.0	110,852
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	25.7	2.17	0.87	6,869	530	44.8	17.9	141,481
User Defined Parking	81.2	6.87	2.75	21,665	1,499	127	50.8	400,006

### 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	160,443	53,481	14,383

### 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)
General Heavy Industry	954,706	349	0.0330	0.0040	4,285,154
Parking Lot	63,948	349	0.0330	0.0040	0.00
Parking Lot	116,508	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00
User Defined Parking	0.00	349	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)
General Heavy Industry	23,071,813	917,776
Parking Lot	0.00	0.00

Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Heavy Industry	124	0.00
Parking Lot	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	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
General Heavy Industry	Other commercial A/C and heat pumps	User Defined	150	7.50	7.50	7.50	18.0

## 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
----------------	-----------	-------------	----------------	---------------	------------	-------------

## 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
----------------	-----------	----------------	---------------	----------------	------------	-------------

### 5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
----------------	-----------	--------	--------------------------	------------------------------	------------------------------

## 5.17. User Defined

Equipment Type	Fuel Type
—	—

## 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
--------------------	---------------	-------------

### 5.18.2. Sequestration

## 5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
-----------	--------	------------------------------	------------------------------

## 8. User Changes to Default Data

Screen	Justification
Land Use	Total Project area is 9.13 acres
Construction: Construction Phases	Construction anticipated to begin February 1, 2023 and end January 31, 2024
Construction: Off-Road Equipment	Equipment based on equipment used for construction of similar projects
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic analysis
Operations: Fleet Mix	Fleet mix revised based on information provided in the Traffic analysis
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater.

# BCI IV Harvill Industrial Center (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	BCI IV Harvill Industrial Center (Operations)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.84106820160365, -117.25207278942537
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5479
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

## 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	99.8	1000sqft	3.62	99,770	57,883	—	—	Passenger Cars
Parking Lot	73.0	Space	0.27	0.00	0.00	0.00	—	Standard Parking
Parking Lot	133	Space	1.68	0.00	0.00	0.00	—	Trailer Parking

Other Asphalt Surfaces	155	1000sqft	3.55	0.00	0.00	0.00	—	—
User Defined Industrial	99.8	User Defined Unit	0.00	0.00	0.00	0.00	—	Trucks
User Defined Parking	133	User Defined Unit	0.00	0.00	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.	1.86	3.98	9.48	15.7	0.09	0.18	1.82	2.00	0.17	0.38	0.56	94.8	10,839	10,934	9.89	1.31	32.7	11,604
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.05	3.24	9.87	9.76	0.09	0.17	1.82	1.99	0.17	0.38	0.55	94.8	10,687	10,781	9.89	1.31	2.66	11,423
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.31	3.51	7.45	10.4	0.07	0.14	1.33	1.47	0.14	0.28	0.42	94.8	8,185	8,279	9.84	0.99	11.6	8,833
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.64	1.36	1.90	0.01	0.03	0.24	0.27	0.03	0.05	0.08	15.7	1,355	1,371	1.63	0.16	1.92	1,462

### 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	1.03	0.82	8.93	10.9	0.09	0.13	1.82	1.95	0.13	0.38	0.51	—	9,546	9,546	0.19	1.19	30.8	9,937
Area	0.77	3.14	0.04	4.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.8	17.8	< 0.005	< 0.005	—	17.9
Energy	0.06	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,120	1,120	0.10	0.01	—	1,125
Water	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
Waste	—	—	—	—	—	—	—	—	—	—	—	50.5	0.00	50.5	5.05	0.00	—	177
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87
Total	1.86	3.98	9.48	15.7	0.09	0.18	1.82	2.00	0.17	0.38	0.56	94.8	10,839	10,934	9.89	1.31	32.7	11,604
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.00	0.78	9.35	9.33	0.09	0.13	1.82	1.95	0.13	0.38	0.51	—	9,412	9,412	0.19	1.20	0.80	9,774
Area	—	2.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.06	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,120	1,120	0.10	0.01	—	1,125
Water	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
Waste	—	—	—	—	—	—	—	—	—	—	—	50.5	0.00	50.5	5.05	0.00	—	177
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87
Total	1.05	3.24	9.87	9.76	0.09	0.17	1.82	1.99	0.17	0.38	0.55	94.8	10,687	10,781	9.89	1.31	2.66	11,423
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.73	0.57	6.91	7.02	0.07	0.10	1.33	1.43	0.09	0.28	0.37	—	6,898	6,898	0.14	0.88	9.73	7,172
Area	0.53	2.91	0.03	2.97	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	12.2	12.2	< 0.005	< 0.005	—	12.3
Energy	0.06	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,120	1,120	0.10	0.01	—	1,125
Water	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
Waste	—	—	—	—	—	—	—	—	—	—	—	50.5	0.00	50.5	5.05	0.00	—	177

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87
Total	1.31	3.51	7.45	10.4	0.07	0.14	1.33	1.47	0.14	0.28	0.42	94.8	8,185	8,279	9.84	0.99	11.6	8,833
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.13	0.10	1.26	1.28	0.01	0.02	0.24	0.26	0.02	0.05	0.07	—	1,142	1,142	0.02	0.15	1.61	1,187
Area	0.10	0.53	< 0.005	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.02	2.02	< 0.005	< 0.005	—	2.03
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	185	185	0.02	< 0.005	—	186
Water	—	—	—	—	—	—	—	—	—	—	—	7.32	25.6	32.9	0.75	0.02	—	57.2
Waste	—	—	—	—	—	—	—	—	—	—	—	8.37	0.00	8.37	0.84	0.00	—	29.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.31	0.31
Total	0.24	0.64	1.36	1.90	0.01	0.03	0.24	0.27	0.03	0.05	0.08	15.7	1,355	1,371	1.63	0.16	1.92	1,462

## 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	0.54	0.48	0.34	6.79	0.01	0.01	0.07	0.07	0.01	0.02	0.03	—	1,454	1,454	0.05	0.03	5.78	1,471
Parking Lot	0.11	0.10	0.07	1.46	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	312	312	0.01	0.01	1.24	315

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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	0.00
User Defined Industrial	0.17	0.10	4.04	1.20	0.03	0.06	0.26	0.32	0.06	0.08	0.14	—	3,653	3,653	0.06	0.55	10.5	3,828	
User Defined Parking	0.21	0.13	4.49	1.46	0.04	0.06	0.29	0.35	0.06	0.09	0.16	—	4,128	4,128	0.07	0.60	13.2	4,323	
Total	1.03	0.82	8.93	10.9	0.09	0.13	0.63	0.76	0.13	0.20	0.33	—	9,546	9,546	0.19	1.19	30.8	9,937	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Unrefrigerated Warehouse-No Rail	0.51	0.46	0.38	5.47	0.01	0.01	0.07	0.07	0.01	0.02	0.03	—	1,341	1,341	0.05	0.04	0.15	1,353	
Parking Lot	0.11	0.10	0.08	1.17	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	287	287	0.01	0.01	0.03	290	
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	
User Defined Industrial	0.17	0.10	4.22	1.21	0.03	0.06	0.26	0.32	0.06	0.08	0.14	—	3,654	3,654	0.06	0.55	0.27	3,820	
User Defined Parking	0.20	0.13	4.68	1.47	0.04	0.06	0.29	0.35	0.06	0.09	0.16	—	4,129	4,129	0.07	0.61	0.34	4,312	
Total	1.00	0.78	9.35	9.33	0.09	0.13	0.63	0.76	0.13	0.20	0.33	—	9,412	9,412	0.19	1.20	0.80	9,774	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Unrefrigerated Warehouse-No Rail	0.07	0.06	0.05	0.76	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	164	164	0.01	< 0.005	0.30	166	

Parking Lot	0.01	0.01	0.01	0.16	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	35.2	35.2	< 0.005	< 0.005	0.06	35.6
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
User Defined Industrial	0.02	0.01	0.57	0.16	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	443	443	0.01	0.07	0.55	463
User Defined Parking	0.03	0.02	0.63	0.20	0.01	0.01	0.04	0.05	0.01	0.01	0.02	—	500	500	0.01	0.07	0.69	523
Total	0.13	0.10	1.26	1.28	0.01	0.02	0.08	0.10	0.02	0.03	0.04	—	1,142	1,142	0.02	0.15	1.61	1,187

### 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	—	—	—	—	—	—	—	—	—	—	—	—	439	439	0.04	0.01	—	441
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	71.1	71.1	0.01	< 0.005	—	71.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	510	510	0.05	0.01	—	513
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	439	439	0.04	0.01	—	441
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	71.1	71.1	0.01	< 0.005	—	71.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	510	510	0.05	0.01	—	513
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	72.6	72.6	0.01	< 0.005	—	73.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	11.8	11.8	< 0.005	< 0.005	—	11.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	84.4	84.4	0.01	< 0.005	—	84.9

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	0.06	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	610	610	0.05	< 0.005	—	612
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
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
User Defined Parking	0.00	0.00	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	0.06	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	610	610	0.05	< 0.005	—	612
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrige Warehouse-No Rail	0.06	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	610	610	0.05	< 0.005	—	612
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
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
User Defined Parking	0.00	0.00	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	0.06	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	610	610	0.05	< 0.005	—	612
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrige rated Warehouse-No Rail	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	101	101	0.01	< 0.005	—	101
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
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
User Defined Parking	0.00	0.00	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	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	101	101	0.01	< 0.005	—	101

### 4.3. Area Emissions by Source

#### 4.3.2. 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	—	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.77	0.71	0.04	4.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.8	17.8	< 0.005	< 0.005	—	17.9
Total	0.77	3.14	0.04	4.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.8	17.8	< 0.005	< 0.005	—	17.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	2.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.10	0.09	< 0.005	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.02	2.02	< 0.005	< 0.005	—	2.03
Total	0.10	0.53	< 0.005	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.02	2.02	< 0.005	< 0.005	—	2.03

#### 4.4. Water Emissions by Land Use

##### 4.4.2. 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	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	44.2	155	199	4.55	0.11	—	345
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	7.32	25.6	32.9	0.75	0.02	—	57.2
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.32	25.6	32.9	0.75	0.02	—	57.2

4.5. Waste Emissions by Land Use

4.5.2. 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	—	—	—	—	—	—	—	—	—	—	—	50.5	0.00	50.5	5.05	0.00	—	177
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	50.5	0.00	50.5	5.05	0.00	—	177
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrige Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	50.5	0.00	50.5	5.05	0.00	—	177
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	50.5	0.00	50.5	5.05	0.00	—	177
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrige rated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	8.37	0.00	8.37	0.84	0.00	—	29.3
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
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Parking	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	8.37	0.00	8.37	0.84	0.00	—	29.3

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.87	1.87
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.31	0.31
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.31	0.31

### 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)

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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)

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

### 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

### 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	112	9.78	3.89	29,913	1,950	170	67.7	520,669
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	24.0	2.03	0.81	6,407	418	35.4	14.1	111,525
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	60.0	5.19	2.10	16,013	1,250	108	43.7	333,710
User Defined Parking	82.0	6.94	2.78	21,884	1,517	128	51.4	404,786

### 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	149,655	49,885	14,383

#### 5.10.3. Landscape Equipment

Season	Unit	Value
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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	459,177	349	0.0330	0.0040	1,904,827
Parking Lot	10,303	349	0.0330	0.0040	0.00
Parking Lot	64,106	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00
User Defined Parking	0.00	349	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	23,071,813	917,776
Parking Lot	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	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	93.8	0.00
Parking Lot	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	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
General Heavy Industry	Other commercial A/C and heat pumps	User Defined	150	0.30	4.00	4.00	18.0

## 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
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### 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
—	—

### 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	29.1	annual days of extreme heat
Extreme Precipitation	2.10	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	6.94	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 (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth 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 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

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	N/A	N/A	N/A	N/A
Air Quality	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	N/A	N/A	N/A	N/A
Air Quality	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	97.0

AQ-PM	59.4
AQ-DPM	37.5
Drinking Water	9.23
Lead Risk Housing	47.7
Pesticides	62.1
Toxic Releases	42.9
Traffic	88.8
Effect Indicators	—
CleanUp Sites	86.7
Groundwater	47.4
Haz Waste Facilities/Generators	10.2
Impaired Water Bodies	0.00
Solid Waste	52.9
Sensitive Population	—
Asthma	60.6
Cardio-vascular	85.8
Low Birth Weights	31.7
Socioeconomic Factor Indicators	—
Education	87.7
Housing	81.3
Linguistic	64.8
Poverty	83.3
Unemployment	60.6

## 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	6.351854228
Employed	6.03105351
Median HI	—
Education	—
Bachelor's or higher	2.912870525
High school enrollment	14.38470422
Preschool enrollment	8.892595919
Transportation	—
Auto Access	50.17323239
Active commuting	15.14179392
Social	—
2-parent households	34.73630181
Voting	3.888104709
Neighborhood	—
Alcohol availability	71.10227127
Park access	2.194276915
Retail density	13.39663801
Supermarket access	2.399589375
Tree canopy	1.013730271
Housing	—
Homeownership	46.10547928
Housing habitability	18.85025022
Low-inc homeowner severe housing cost burden	75.25984858
Low-inc renter severe housing cost burden	7.994353907
Uncrowded housing	6.73681509
Health Outcomes	—

Insured adults	2.810214295
Arthritis	0.0
Asthma ER Admissions	42.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	16.2
Cognitively Disabled	44.8
Physically Disabled	41.1
Heart Attack ER Admissions	12.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	86.0
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	51.6

Elderly	79.3
English Speaking	32.3
Foreign-born	68.1
Outdoor Workers	7.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	94.5
Traffic Density	80.7
Traffic Access	23.0
Other Indices	—
Hardship	97.3
Other Decision Support	—
2016 Voting	8.9

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	79.0
Healthy Places Index Score for Project Location (b)	2.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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 9.13 acres
Construction: Construction Phases	Construction anticipated to begin February 1, 2023 and end January 31, 2024
Construction: Off-Road Equipment	Equipment based on equipment used for construction of similar projects
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic analysis
Operations: Fleet Mix	Fleet mix revised based on information provided in the Traffic analysis
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater.
Characteristics: Project Details	ex

**APPENDIX 4.3:**

**EMFAC2021**

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Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2023

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/year for CVMT and EVMT, trips/year for Trips, kWh/year for Energy Consumption, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
Riverside (SC)	2023	HHDT	Aggregate	Aggregate	Gasoline	9.455104489	131459.0712	35.50354452	35503.54452	99150598.7	131459.0712	599123516.7	6.04	HHDT
Riverside (SC)	2023	HHDT	Aggregate	Aggregate	Diesel	14188.53655	583570327	96603.14331	96603143.31		583570327			
Riverside (SC)	2023	HHDT	Aggregate	Aggregate	Electricity	10.75839329	228949.2981	0	0		228949.2981			
Riverside (SC)	2023	HHDT	Aggregate	Aggregate	Natural Gas	693.7983116	15192781.36	2511.951841	2511951.841		15192781.36			
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Gasoline	469124.6474	7067158685	242806.6852	242806685.2	246740301.6	7067158685	7550779257	30.60	LDA
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Diesel	1558.762895	20320845.79	477.3973008	477397.3008		20320845.79			
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Electricity	16185.78734	258364117.7	0	0		258364117.7			
Riverside (SC)	2023	LDA	Aggregate	Aggregate	Plug-in Hybrid	11651.42905	204935608.9	3456.219119	3456219.119		204935608.9			
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Gasoline	41569.09002	535313348.3	22207.82689	22207826.89	22223369.92	535313348.3	536734718.5	24.15	LDT1
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Diesel	20.22700504	133115.4936	5.428551707	5428.551707		133115.4936			
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Electricity	42.93918941	629191.2642	0	0		629191.2642			
Riverside (SC)	2023	LDT1	Aggregate	Aggregate	Plug-in Hybrid	33.25263876	659063.4443	10.11447806	10114.47806		659063.4443			
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Gasoline	191587.7811	2926985988	123727.7759	123727775.9	124415304.6	2926985988	2971260063	23.88	LDT2
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Diesel	577.8339592	9483128.387	294.7747611	294774.7611		9483128.387			
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Electricity	816.9774193	10243768.16	0	0		10243768.16			
Riverside (SC)	2023	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1285.022226	24547178.6	392.753913	392753.913		24547178.6			
Riverside (SC)	2023	LHDT1	Aggregate	Aggregate	Gasoline	18052.34987	214710027.5	16264.43139	16264431.39	25315578.41	214710027.5	400294089.8	15.81	LHDT1
Riverside (SC)	2023	LHDT1	Aggregate	Aggregate	Diesel	15395.69696	185584062.3	9051.14702	9051147.02		185584062.3			
Riverside (SC)	2023	LHDT2	Aggregate	Aggregate	Gasoline	2523.570585	29590445.81	2489.092655	2489092.655	7416109.631	29590445.81	113374760.5	15.29	LHDT2
Riverside (SC)	2023	LHDT2	Aggregate	Aggregate	Diesel	6852.470307	83784314.72	4927.016975	4927016.975		83784314.72			
Riverside (SC)	2023	MCY	Aggregate	Aggregate	Gasoline	24170.7213	49108505.06	1180.944688	1180944.688	1180944.688	49108505.06	49108505.06	41.58	MCY
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Gasoline	159138.1322	2240483695	117575.9492	117575949.2	119384446.1	2240483695	2303280197	19.29	MDV
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Diesel	2483.005938	36136799.05	1546.826654	1546826.654		36136799.05			
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Electricity	897.1539487	11221434.73	0	0		11221434.73			
Riverside (SC)	2023	MDV	Aggregate	Aggregate	Plug-in Hybrid	887.9224631	15438268.06	261.6701687	261670.1687		15438268.06			
Riverside (SC)	2023	MH	Aggregate	Aggregate	Gasoline	5083.841078	14589867.64	2987.294519	2987294.519	3555724.506	14589867.64	20481762.41	5.76	MH
Riverside (SC)	2023	MH	Aggregate	Aggregate	Diesel	2073.70666	5891894.766	568.4299865	568429.9865		5891894.766			
Riverside (SC)	2023	MHDT	Aggregate	Aggregate	Gasoline	1260.142241	16350653.43	3181.987303	3181987.303	22878390.46	16350653.43	192188901.4	8.40	MHDT
Riverside (SC)	2023	MHDT	Aggregate	Aggregate	Diesel	12683.243	173580543.8	19444.4315	19444431.5		173580543.8			
Riverside (SC)	2023	MHDT	Aggregate	Aggregate	Electricity	4.9202908	33851.09994	0	0		33851.09994			
Riverside (SC)	2023	MHDT	Aggregate	Aggregate	Natural Gas	147.6204682	2223853	251.9716552	251971.6552		2223853			
Riverside (SC)	2023	OBUS	Aggregate	Aggregate	Gasoline	386.6813181	4377338.625	865.1912845	865191.2845	1495782.789	4377338.625	9373868.799	6.27	OBUS
Riverside (SC)	2023	OBUS	Aggregate	Aggregate	Diesel	215.667787	4402321.003	569.9480953	569948.0953		4402321.003			
Riverside (SC)	2023	OBUS	Aggregate	Aggregate	Natural Gas	33.12387867	594209.1716	60.64340948	60643.40948		594209.1716			
Riverside (SC)	2023	SBUS	Aggregate	Aggregate	Gasoline	421.1646074	5416181.917	620.6011427	620601.1427	1928236.919	5416181.917	12328318.97	6.39	SBUS
Riverside (SC)	2023	SBUS	Aggregate	Aggregate	Diesel	499.0687276	3439904.877	470.0073536	470007.3536		3439904.877			
Riverside (SC)	2023	SBUS	Aggregate	Aggregate	Electricity	0.562315788	2136.364049	0	0		2136.364049			
Riverside (SC)	2023	SBUS	Aggregate	Aggregate	Natural Gas	428.0776414	3470095.813	837.6284223	837628.4223		3470095.813			
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Gasoline	145.9294435	6041770.968	1072.589711	1072589.711	3632187.011	6041770.968	16196846.91	4.46	UBUS
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Diesel	0.3117338	9845.875493	0.874590555	874.5905545		9845.875493			
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Electricity	0.030745281	971.0663719	0	0		971.0663719			
Riverside (SC)	2023	UBUS	Aggregate	Aggregate	Natural Gas	251.677147	10144259	2558.722709	2558722.709		10144259			

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/year for CVMT and EVMT, trips/year for Trips, kWh/year for Energy Consumption, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
Riverside (SC)	2024	HHDT	Aggregate	Aggregate	Gasoline	7.589475903	113786.0091	30.14312909	30143.12909	100279731.4	113786.0091	613803692.2	6.12	HHDT
Riverside (SC)	2024	HHDT	Aggregate	Aggregate	Diesel	14792.02338	596340506.9	97669.72048	97669720.48		596340506.9			
Riverside (SC)	2024	HHDT	Aggregate	Aggregate	Electricity	47.99547895	1606253.347	0	0		1606253.347			
Riverside (SC)	2024	HHDT	Aggregate	Aggregate	Natural Gas	740.0705237	15743145.86	2579.867799	2579867.799		15743145.86			
Riverside (SC)	2024	LDA	Aggregate	Aggregate	Gasoline	469145.3818	7085090946	238903.8299	238903829.9	243062955.2	7085090946	7657987641	31.51	LDA
Riverside (SC)	2024	LDA	Aggregate	Aggregate	Diesel	1473.049219	18851626.2	439.7144995	439714.4995		18851626.2			
Riverside (SC)	2024	LDA	Aggregate	Aggregate	Electricity	19934.69439	328159523.9	0	0		328159523.9			
Riverside (SC)	2024	LDA	Aggregate	Aggregate	Plug-in Hybrid	12893.65575	225885544.7	3719.410801	3719410.801		225885544.7			
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	Gasoline	40643.24621	528502252.2	21530.04768	21530047.68	21550200.91	528502252.2	530619904	24.62	LDT1
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	Diesel	18.16927182	117875.1936	4.799392489	4799.392489		117875.1936			
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	Electricity	60.98632141	968118.5799	0	0		968118.5799			
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	Plug-in Hybrid	52.35545177	1031657.988	15.35383286	15353.83286		1031657.988			
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	Gasoline	196761.1569	3030302696	124807.115	124807115	125588800.8	3030302696	3086012831	24.57	LDT2
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	Diesel	611.2140627	10065688.28	305.506804	305506.804		10065688.28			
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	Electricity	1212.721837	15079067.55	0	0		15079067.55			
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1617.209463	30565379.76	476.178994	476178.994		30565379.76			
Riverside (SC)	2024	LHDT1	Aggregate	Aggregate	Gasoline	17828.73734	214762485.9	15814.52949	15814529.49	24706225.38	214762485.9	399295586.2	16.16	LHDT1
Riverside (SC)	2024	LHDT1	Aggregate	Aggregate	Diesel	15247.60565	183240310	8891.695883	8891695.883		183240310			
Riverside (SC)	2024	LHDT1	Aggregate	Aggregate	Electricity	53.50587181	1292790.328	0	0		1292790.328			
Riverside (SC)	2024	LHDT2	Aggregate	Aggregate	Gasoline	2494.679179	29349825.66	2415.690169	2415690.169	7267382.396	29349825.66	112758661.6	15.52	LHDT2
Riverside (SC)	2024	LHDT2	Aggregate	Aggregate	Diesel	6844.928194	83091798.01	4851.692227	4851692.227		83091798.01			
Riverside (SC)	2024	LHDT2	Aggregate	Aggregate	Electricity	13.8489928	317037.9282	0	0		317037.9282			
Riverside (SC)	2024	MCY	Aggregate	Aggregate	Gasoline	24077.0623	48669553.86	1165.648599	1165648.599	1165648.599	48669553.86	48669553.86	41.75	MCY
Riverside (SC)	2024	MDV	Aggregate	Aggregate	Gasoline	158529.7591	2244541310	115229.5708	115229570.8	117035531.4	2244541310	2315716725	19.79	MDV
Riverside (SC)	2024	MDV	Aggregate	Aggregate	Diesel	2456.219583	35407756.28	1494.401662	1494401.662		35407756.28			
Riverside (SC)	2024	MDV	Aggregate	Aggregate	Electricity	1347.135818	16720447.79	0	0		16720447.79			
Riverside (SC)	2024	MDV	Aggregate	Aggregate	Plug-in Hybrid	1094.492843	19047211.64	311.5588534	311558.8534		19047211.64			
Riverside (SC)	2024	MH	Aggregate	Aggregate	Gasoline	4781.777946	13610896.25	2785.688937	2785688.937	3339642.723	13610896.25	19350599.97	5.79	MH
Riverside (SC)	2024	MH	Aggregate	Aggregate	Diesel	2046.063726	5739703.715	553.953786	553953.786		5739703.715			
Riverside (SC)	2024	MHDT	Aggregate	Aggregate	Gasoline	1238.0029	16338867.45	3135.493991	3135493.991	23076682.45	16338867.45	195538138.7	8.47	MHDT
Riverside (SC)	2024	MHDT	Aggregate	Aggregate	Diesel	12954.3675	176205580.2	19676.0133	19676013.3		176205580.2			
Riverside (SC)	2024	MHDT	Aggregate	Aggregate	Electricity	40.46425607	652027.6804	0	0		652027.6804			
Riverside (SC)	2024	MHDT	Aggregate	Aggregate	Natural Gas	158.0466253	2341663.336	265.1751591	265175.1591		2341663.336			
Riverside (SC)	2024	OBUS	Aggregate	Aggregate	Gasoline	374.6153087	4179652.523	816.3886522	816388.6522	1448796.089	4179652.523	9235296.571	6.37	OBUS
Riverside (SC)	2024	OBUS	Aggregate	Aggregate	Diesel	219.2789175	4421146.516	569.7450307	569745.0307		4421146.516			
Riverside (SC)	2024	OBUS	Aggregate	Aggregate	Electricity	0.821516166	18182.28444	0	0		18182.28444			
Riverside (SC)	2024	OBUS	Aggregate	Aggregate	Natural Gas	34.6553722	616315.2475	62.66240627	62662.40627		616315.2475			
Riverside (SC)	2024	SBUS	Aggregate	Aggregate	Gasoline	423.5817437	5478383.868	626.1467184	626146.7184	1935258.575	5478383.868	12396347.67	6.41	SBUS
Riverside (SC)	2024	SBUS	Aggregate	Aggregate	Diesel	491.8063992	3343899.326	456.140685	456140.685		3343899.326			
Riverside (SC)	2024	SBUS	Aggregate	Aggregate	Electricity	2.445505521	20273.75397	0	0		20273.75397			
Riverside (SC)	2024	SBUS	Aggregate	Aggregate	Natural Gas	443.1589434	3553790.724	852.9711721	852971.1721		3553790.724			
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	Gasoline	146.2127201	6053134.018	1073.421016	1073421.016	3614773.705	6053134.018	16229605.17	4.49	UBUS
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	Diesel	0.3117338	9845.875493	0.874762616	874.7626165		9845.875493			
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	Electricity	0.120004951	6004.935081	0	0		6004.935081			
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	Natural Gas	252.109466	10160620.35	2540.477927	2540477.927		10160620.35			