

## **Appendix A**

Date Palm Apartments  
Air Quality, Greenhouse Gas, and Energy Impact Study  
MD Acoustics  
August 30, 2024

# **Date Palm Apartments**

## **Air Quality, Greenhouse Gas, and Energy Impact Study**

### **City of Cathedral City, CA**

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Date: 8/30/2024



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CalEEMod Output

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EMFAC2017 Output

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## **GLOSSARY OF TERMS**

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH <sub>4</sub>	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
DPM	Diesel particulate matter
GHG	Greenhouse gas
HFCs	Hydrofluorocarbons
LST	Localized Significant Thresholds
MTCO <sub>2</sub> e	Metric tons of carbon dioxide equivalent
MMTCO <sub>2</sub> e	Million metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NO <sub>x</sub>	Nitrogen Oxides
NO <sub>2</sub>	Nitrogen dioxide
N <sub>2</sub> O	Nitrous oxide
O <sub>3</sub>	Ozone
PFCs	Perfluorocarbons
PM	Particle matter
PM <sub>10</sub>	Particles that are less than 10 micrometers in diameter
PM <sub>2.5</sub>	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAQMD	South Coast Air Quality Management District
SF <sub>6</sub>	Sulfur hexafluoride
SIP	State Implementation Plan
SO <sub>x</sub>	Sulfur Oxides
SRA	Source/Receptor Area
SSAB	Salton Sea Air Basin
TAC	Toxic air contaminants
VOC	Volatile organic compounds
WRCC	Western Regional Climate Center

## 1.0 Introduction

### 1.1 Purpose of Analysis and Study Objectives

This air quality and greenhouse gas (GHG) analysis was prepared to evaluate whether the estimated criteria pollutants and GHG emissions generated from the project would cause a significant impact to the air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The assessment is consistent with the methodology and emission factors endorsed by South Coast Air Quality Management District (SCAQMD), California Air Resource Board (CARB), and the United States Environmental Protection Agency (US EPA).

### 1.2 Project Summary

#### 1.2.1 Site Location

The project site is located on the east side of Date Palm Drive between 30<sup>th</sup> Ave and McCallum Way in the City of Cathedral City, as shown in Exhibit A. The site is currently zoned as Planned Community Commercial by the City of Cathedral City. The project is bordered by single family residential uses to the east and south, commercial uses to the north, and Date Palm Drive to the west.

#### 1.2.2 Project Description

The project proposes the construction of a 204-unit apartment complex with 318 parking spaces on approximately 11.49 acres. Exhibit B demonstrates the site plan for the project.

Construction activities within the project area will consist of site preparation, grading, building, paving, and architectural coating. Table 1 summarizes the land use description for the project Site.

**Table 1: Land Use Summary**

Land Use	Unit Amount	Size Metric
Apartments Mid Rise	204.0	Dwelling Units
Garages	192.0	Spaces
Parking Lot	4.4	Acres

#### 1.2.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, a sensitive receptor would be a location where a sensitive individual could remain for 24-hours or longer, such as residences, hospitals, and schools (etc.).



The closest existing sensitive receptors (to the site area) are multi-family residences 10 feet to the east of the project boundary.

### **1.3 Executive Summary of Findings and Mitigation Measures**

The following is a summary of the analysis results:

#### **Construction-Source Emissions**

Project construction-source emissions would not exceed regional thresholds of significance established by the SCAQMD for VOCs. For localized emissions, the project will not exceed applicable Localized Significance Thresholds (LSTs) established by the SCAQMD.

Project construction-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). As discussed herein, the project will comply with all applicable SCAQMD construction-source emission reduction rules and guidelines. Project construction source emissions would not cause or substantively contribute to violation of the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS).

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

#### **Operational-Source Emissions**

The project operational-sourced emissions would not exceed applicable regional thresholds of significance established by the SCAQMD. Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the Operations-Related Local Air Quality Impacts section of this report. Additionally, project-related traffic will not cause or result in CO concentrations exceeding applicable state and/or federal standards (CO “hotspots”). Project operational-source emissions would therefore not adversely affect sensitive receptors within the vicinity of the project.

Project operational-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). The project's emissions meet SCAQMD regional thresholds and will not result in a significant cumulative impact. The project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential operational-source odor impacts are therefore considered less-than significant.

Project-related GHG emissions meet the County of Riverside Climate Action Plan (CAP) Update screening threshold of 3,000 metric tons of carbon dioxide equivalents (MTCO<sub>2</sub>e) per year and are also considered to be less than significant. The project also complies with the goals of the CARB Scoping Plan, AB-32, and SB-32.

## **Mitigation Measures**

### **A. Construction Measures**

*Adherence to SCAQMD Rule 403 is required.*

**Mitigation Measure 1:** VOC content of interior architectural coatings shall be limited to 45 grams VOC per liter.

### **B. Operational Measures to Reduce Greenhouse Gas Emissions**

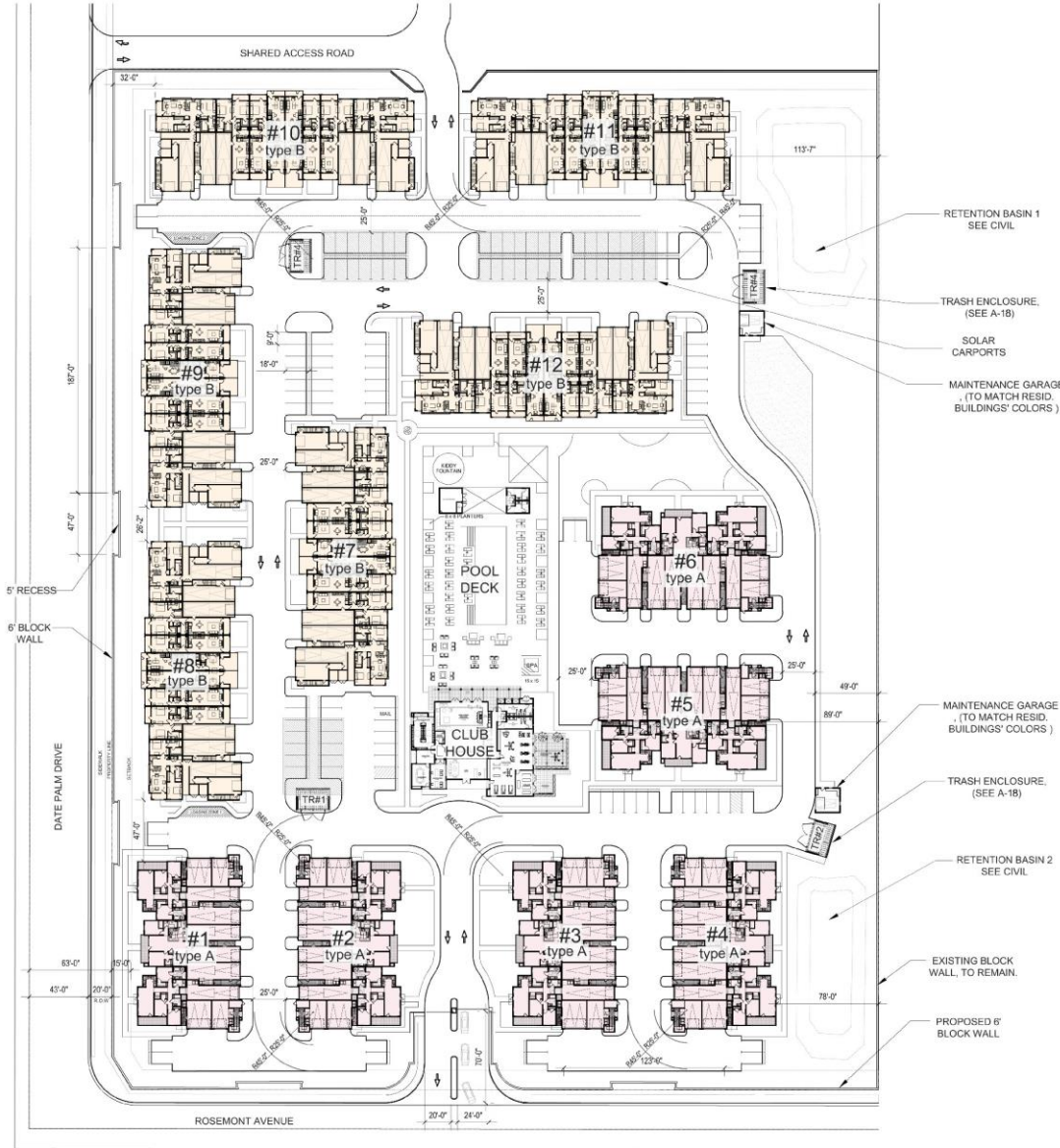
No operational mitigation required.



The map displays the proposed site for the Cathedral City Community Center, highlighted by a red rectangle. The site is situated in a residential neighborhood, bounded by 30th Avenue to the north, Mccallum Way to the south, Date Palm Dr to the west, and Alexander Dr to the east. Surrounding the site are various local businesses and landmarks, including Northgate Community Church, Sunny Sands Elementary School, and Dennis Keat Soccer Park. The map also shows a network of streets, including 30th Avenue, Mccallum Way, Date Palm Dr, Alexander Dr, and several smaller residential streets. A scale bar at the bottom right indicates a distance of 1000 feet, and a north arrow is located in the bottom right corner.



Exhibit B  
Site Plan



PROJECT LOCATION: DATE PALM DR. AND ROSEMONT AVE.  
APN: 670-110-043-6  
LOT SIZE: 11.49 AC  
GENERAL PLAN DESIGNATION: GENERAL COMMERCIAL (GC)  
ZONING DESIGNATION: PLANNED COMMUNITY COMMERCIAL (PCC)  
ZONING PROPOSED: R-3  
DENSITY PROPOSED: 17.7 DU/AC

**BIG HOUSE: 2 story - (6 BUILDINGS, 10 UNITS EACH)**

UNIT	TYPE	NET RENTABLE	BALC/PATIO	UNIT GROSS	UNITS PER BLDG	UNITS TOTAL	TOTAL NET RENTABLE	DIRECT ACCESS GARAGE	stalls each bldg
A1-U	1B / 1BA	929	100	1,029	2	12	11,148	2	tandem
B2-U	2B / 2BA	1,232	65	1,297	2	12	14,784	1	standard
B4-L	2B / 2BA	1,090	100	1,190	1	6	6,540	2	tandem
B4-U	2B / 2BA	1,150	100	1,250	1	6	6,900	2	tandem
C1-L	3B / 3BA	1,280	140	1,420	2	12	15,360	2	tandem
C1-U	3B / 3BA	1,400	63	1,463	2	12	16,800	2	standard
TOTALS					10	60	71,532		18

**STAK HOUSE: 2/3 story - (6 BUILDINGS, 24 UNITS EACH)**

UNIT	TYPE	NET RENTABLE	BALC/PATIO	UNIT GROSS	UNITS PER BLDG	UNITS TOTAL	TOTAL NET RENTABLE	DIRECT ACCESS GARAGE	stalls each bldg
A1 1st flr	1B / 1BA	749	131	880	2	12	8,988		
A3 2nd/3rd flr	1B / 1BA	777	0	777	4	24	18,648		
B1 2nd flr	2B / 2BA	1,113	0	1,113	2	12	13,356	1	standard
B2 1st flr	2B / 2BA	1,108	65	1,173	2	12	13,296	2	tandem
B3 2nd flr	2B / 2BA	1,150	190	1,340	2	12	13,800	2	tandem
B4 2nd/3rd flr	2B / 2BA	1,139	142	1,281	2	12	13,668	2	tandem
B5 1st flr	2B / 2BA	1,053	130	1,183	2	12	12,636		
B6 2nd/3rd flr	2B / 2BA	1,050	80	1,130	4	24	25,200		
B7 1st/2nd flr	2B / 2BA	1,114	80	1,194	2	12	13,368		
B8 2nd/3rd flr	2B / 2BA	1,114	80	1,194	2	12	13,368		
TOTALS					24	144	146,328		14

**OVERALL UNIT MIX**

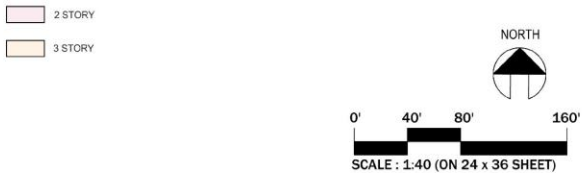
1B/1BA UNITS	48	23.5%
2B/2BA UNITS	132	64.7%
3B/3BA UNITS	24	11.8%
TOTAL UNITS	204	100.0%

**PARKING**

GARAGE STALLS TOTAL	192
SURFACE STALLS TOTAL	118
TOTAL	318 1.56 PER UNIT

**COMMON SPACES**

CLUB HOUSE	+/-	6,000 SF
COMMON OPEN SPACE	+/-	220,000 SF
BUILDINGS FOOTPRINTS TOTAL	+/-	144,000 SF



A-02

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## **2.0 Regulatory Framework and Background**

### **2.1 Air Quality Regulatory Setting**

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level. The California Air Resources Board (ARB) regulates at the state level. The South Coast Air Quality Management District (SCAQMD) regulates at the air basin level.

#### **2.1.1 National and State**

The EPA is responsible for global, international, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Air Quality Standards, also known as federal standards. There are six common air pollutants, called criteria pollutants, which were identified from the provisions of the Clean Air Act of 1970.

- Ozone
- Nitrogen Dioxide
- Lead
- Particulate Matter (PM10 and PM2.5)
- Carbon Monoxide
- Particulate Matter
- Sulfur Dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.

A State Implementation Plan (SIP) is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts—air district prepares their federal attainment plan, which are sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. See <http://www.arb.ca.gov/research/aqs/aqs.htm> for additional information on criteria pollutants and air quality standards.

The federal and state ambient air quality standards are summarized in Table 2 and can also be found at <http://www.arb.ca.gov/research/aqs/aqs2.pdf>.

**Table 2: Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards <sup>1</sup>		National Standards <sup>2</sup>		
		Concentrations <sup>3</sup>	Method <sup>4</sup>	Primary <sup>3,5</sup>	Secondary <sup>3,6</sup>	Method <sup>7</sup>
Ozone (O3)	1-Hour	0.09 ppm	Ultraviolet	--	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm	Photometry	0.070 ppm (147 µg/m³)		
Respirable Particulate Matter (PM10) <sup>8</sup>	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µ/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		--		
Fine Particulate Matter (PM2.5) <sup>8</sup>	24-Hour	--	--	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 µg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 µg/m³)	--	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 µg/m³)		9 ppm (10 µg/m³)	--	
	8-Hour (Lake Tahoe)	6 ppm (7 µg/m³)		--	--	
Nitrogen Dioxide (NO <sub>2</sub> ) <sup>9</sup>	1-Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	--	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (357 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO <sub>2</sub> ) <sup>10</sup>	1-Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	--	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	--		--	0.5 ppm (1300 mg/m³)	
	24-Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas) <sup>10</sup>	--	
	Annual Arithmetic Mean	--		0.130ppm (for certain areas) <sup>10</sup>	--	
Lead <sup>11,12</sup>	30 Day Average	1.5 µg/m³	Atomic Absorption	--	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Calendar Qtrtr	--		1.5 µg/m³ (for certain areas) <sup>12</sup>		
	Rolling 3-Month Average	--		0.15 µg/m³		
Visibility Reducing Particles <sup>13</sup>	8-Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride <sup>11</sup>	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

**Notes:**

- California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equalled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
- National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
9. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
10. On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.  
  
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
11. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
12. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m<sup>3</sup> as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
13. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Several pollutants listed in Table 2 are not addressed in this analysis. Analysis of lead is not included in this report because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

### **2.1.2 South Coast Air Quality Management District**

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

Every three (3) years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon.

On March 23, 2017 CARB approved the 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air.

The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the NAAQS are not met on time. As with every AQMP, a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures is updated with the latest data and methods. The most significant air quality challenge in the Basin is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. The primary goal of the 2016 AQMP is to meet clean air standards and protect public health, including ensuring benefits to environmental justice and disadvantaged communities. Now that the plan has been approved by CARB, it has been forwarded to the U.S. Environmental Protection Agency for its review. If approved by EPA, the plan becomes federally enforceable.

South Coast AQMD adopted the 2022 AQMP on December 2, 2022, to address the attainment of the 2015 8-hour ozone standard (70 ppb) for South Coast Air Basin and Coachella Valley. To meet this standard, the AQMP determined NOx emissions must be reduced by 67% percent more than is required by adopted rules and regulations by 2037. The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available zero-emission (ZE) and low NOx technologies and (2) developing new ZE and ultra-low NOx technologies for use in cases where the technology is not currently available. South Coast AQMD will prioritize distribution of incentive funding in environmental justice areas and seek opportunities to focus benefits on the most disadvantaged communities. Cost-effectiveness and affordability will be further considered during the rulemaking or incentive program development process.

On June 21, 2002, the SCAQMD adopted the 2002 Coachella Valley PM10 State Implementation Plan (CVSIP). The 2002 CVSIP, which included a request for extension of the PM10 deadline and met all applicable federal Clean Air Act requirements, including a Most Stringent Measures analysis, control measures, and attainment demonstration. U.S. EPA approved the 2002 CVSIP on April 18, 2003. At the time of adoption, the AQMD committed to revising with the 2002 CVSIP with the latest approved mobile source emissions estimates, planning assumptions and fugitive dust source emission estimates, when they became available.

The 2003 CVSIP updates those elements of the 2002 CVSIP; the control strategies and control measure commitments have not been revised and remain the same as in the 2002 CVSIP. The 2003 CVSIP contains updated emissions inventories, emission budgets, and attainment modeling. It requests that U.S. EPA replace the approved transportation conformity budgets in the 2002 CVSIP with those in the 2003 CVSIP. U.S. EPA approved these budgets on March 25, 2004 with an effective date of April 9, 2004.



### **South Coast Air Quality Management District Rules**

The AQMP for the basin establishes a program of rules and regulations administered by SCAQMD to obtain attainment of the state and federal standards. Some of the rules and regulations that apply to this Project include, but are not limited to, the following:

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

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

Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable suppression techniques are indicated below and include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas in active for 10 days or more).
- Water active sites at least three times daily.
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) section 23114.
- Pave construction access roads at least 100 feet onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets.

**SCAQMD Rule 1113** governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during

construction. Therefore, all paints and solvents used during construction and operation of project must comply with Rule 1113.

**Idling Diesel Vehicle Trucks** – Idling for more than 5 minutes in any one location is prohibited within California borders.

**Rule 2702.** The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the SCAQMD Governing Board. Priority will be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the cap-and-trade program identified for implementation in CARB’s Scoping Plan, or a Federal cap and trade program.

### **2.1.3 Local**

Local jurisdictions, such as the City of Cathedral City, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. It is the responsibility of the District, CVAG, and the City of Cathedral City to monitor pollutant levels and regulate air pollution sources. With the installation of additional monitoring devices in the Whitewater River, the District is collecting data to establish a “naturally occurring” or “background” level for PM10 in the Coachella Valley. This data will allow a more meaningful estimate of manmade PM10 emissions.

#### *City of Cathedral City General Plan*

The City of Cathedral City updated their General Plan in July 2019. The 2019 General Plan Air Quality and Climate Stability Element contains the following goals and policies aimed at reducing air pollution:

**Goal** Preservation and enhancement of local and regional air quality to assure the long-term protection of the community’s health and welfare.

**Policy 1** The City shall be proactive in regulating local pollutant emitters and shall cooperate with Coachella Valley Association of Governments and the South Coast Air Quality Management District to assure compliance with air quality standards.

**Policy 2** The City shall fully implement dust control ordinances, and coordinate and cooperate with local, regional, and federal efforts to monitor, manage, and reduce the levels of major pollutants affecting the City and region, with particular emphasis on PM10 emissions.

**Policy 3** City land use planning efforts shall assure that sensitive receptors are separated from polluting point sources, to the greatest extent practicable.

- Policy 4*      Development proposals brought before the City shall be reviewed for their potential to adversely impact local and regional air quality, and shall be required to mitigate any significant impacts.
- Policy 5*      The City shall encourage and promote the use of clean alternative energy sources for transportation, heating and cooling, lighting and other power needs.
- Policy 6*      The City shall encourage and support the development of facilities and projects that facilitate and enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle and LSEV paths and lanes, and community-wide multi-use trails.
- Policy 7*      The City shall promote the expanded availability of mass transit services, coordinating with Sunline Transit Authority to link residential, commercial and resort businesses, and employment centers with the City’s residential neighborhoods and nearby communities.
- Policy 8*      The City shall continue to implement effective street sweeping and post-windstorm cleanup programs to reduce the cumulative impacts of blowsand and nuisance dust resulting from construction activities, natural processes, and other sources.
- Policy 9*      The City shall promote public educational programs that describe the causes of air pollution, encourage the use of alternative energy sources, and recommend methods for reducing the impacts of blowsand.
- Policy 10*     The City shall continue to implement and update policies, regulations, and action plans that promote climate stability and greenhouse gas emission reductions, including but not limited to the Climate Action Plan, Energy Action Plan, Greenhouse Gas Inventory and Green for Life program.

## **2.2      Greenhouse Gas Regulatory Setting**

### **2.2.1    International**

Many countries around the globe have made an effort to reduce GHGs since climate change is a global issue.

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

**United Nations.** The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national

strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

The 2014 UN Climate Change Conference in Lima Peru provided a unique opportunity to engage all countries to assess how developed countries are implementing actions to reduce emissions.

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

## **2.2.2 National**

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

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

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). The second phase of the national program would involve proposing new fuel economy and greenhouse gas standards for model years 2017 – 2025 by September 1, 2011.

On October 25, 2010, the EPA and the U.S. Department of Transportation proposed the first national standards to reduce greenhouse gas emissions and improve fuel efficiency of heavy-duty trucks and buses. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by 2018 model year.

Issued by NHTSA and EPA in March 2020 (published on April 30, 2020 and effective after June 29, 2020), the Safer Affordable Fuel-Efficient Vehicles Rule would maintain the Corporate Average Fuel Economy (CAFE) and CO<sub>2</sub> standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO<sub>2</sub> standards for model year 2020 are 43.7 mpg and 204 grams of CO<sub>2</sub> per mile for passenger cars and 31.3 mpg and 284 grams of CO<sub>2</sub> per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. This Rule also excludes CO<sub>2</sub>-equivalent emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020.<sup>1</sup>

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

**Climate Adaption Plan.** The EPA Plan identifies priority actions the Agency will take to incorporate considerations of climate change into its programs, policies, rules and operations to ensure they are effective under future climatic conditions. The following link provides more information on the EPA Plan: <https://www.epa.gov/arc-x/planning-climate-change-adaptation>

### **2.2.3 California**

**California Code of Regulations (CCR) Title 24, Part 6.** CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established 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 efficiency

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<sup>1</sup> National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA), 2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at: <https://www.gpo.gov/fdsys/pkg/FR-2018-08-24/pdf/2018-16820.pdf>.

technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. 2013, 2016, and 2019 standards have been approved and became effective July 1, 2014, January 1, 2016, and January 1, 2020, respectively.

**California Code of Regulations (CCR) Title 24, Part 11.** All buildings for which an application for a building permit is submitted on or after January 1, 2023 must follow the 2022 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions. The following links provide more information on Title 24, Part 11:

<https://www.dgs.ca.gov/BSC/Codes>

<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>

**California Green Building Standards** On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Housing and Community Development (HCD) updated CALGreen through the 2015 Triennial Code Adoption Cycle, during the 2016 to 2017 fiscal year. During the 2022-2023 fiscal year, the Department of Housing and Community Development (HCD) updated CALGreen through the 2023 Triennial Code Adoption Cycle.

The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

The CEC estimates that over 30 years the 2022 Energy Code will provide \$1.5 billion in consumer benefits and reduce 10 million metric tons of GHG. Changes compared to the 2019 Energy Code include increases to on-site renewable energy generation from solar, increases to electric load flexibility to support grid reliability, reduction of emissions from newly constructed buildings, reduction

of air pollution for improved public health, and increased adoption of environmentally beneficial efficient electric technologies.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official. The following link provides more on CalGreen Building Standards:

<http://www.bsc.ca.gov/Home/CALGreen.aspx>

**Executive Order S-3-05.** California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following targets:

- By 2010, California shall reduce greenhouse gas emissions to 2000 levels;
- By 2020, California shall reduce greenhouse gas emissions to 1990 levels.
- By 2050, California shall reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

**Executive Order S-01-07.** Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard and began implementation on January 1, 2011. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. CARB approved some amendments to the LCFS in December 2011, which were implemented on January 1, 2013. In September 2015, the Board approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted. In 2018, the Board approved amendments to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted

through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are “back-loaded”, with more reductions required in the last five years, than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today’s fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

**SB 97.** Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor’s Office of Planning and Research (OPR), which is part of the State Resource Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance are provided and no specific mitigation measures are identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR



encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.

- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that “to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation.”
- OPR’s emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

**AB 32.** The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. “Greenhouse gases” as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. ARB is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB Board approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>e) on December 6, 2007 (California Air Resources Board 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO<sub>2</sub>e. Emissions in 2020 in a “business as usual” scenario are estimated to be 596 MMTCO<sub>2</sub>e.

Under AB 32, the ARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable by January 1, 2010. The ARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of these early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. The ARB estimates that the 44 recommendations are expected to result in reductions of at least 42 MMTCO<sub>2</sub>e by 2020, representing approximately 25 percent of the 2020 target.

The ARB’s Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State’s emissions to 1990 levels by the year 2020 (California Air Resources Board 2008). The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the

associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California’s clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State’s long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between “capped” and “uncapped” strategies. “Capped” strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and-trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. “Uncapped” strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions.<sup>4</sup>

**Senate Bill 100.** Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

The interim thresholds from prior Senate Bills and Executive Orders would also remain in effect. These include Senate Bill 1078 (SB 1078), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) which changed the target date to 2010. Executive Order S-14-08, which was signed on November 2008 and expanded the State’s Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed the CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

**SB 375.** Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2012, SCAG adopted the 2012-2035 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which meets the CARB emission reduction requirements.

On September 3, 2020, SCAG's Regional Council approved and fully adopted the Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), and the addendum to the Connect SoCal Program Environmental Impact Report. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. Connect SoCal outlines more than \$638 billion in transportation system investments through 2045. Connect SoCal is supported by a combination of transportation and land use strategies that help the region achieve state greenhouse gas emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry and utilize resources more efficiently. By integrating the Forecasted Development Pattern with a suite of financially constrained transportation investments, Connect SoCal can reach the regional target of reducing greenhouse gases, or GHGs, from autos and light-duty trucks by 8 percent per capita by 2020, and 19 percent by 2035 (compared to 2005 levels).

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as “transit priority projects.”

**Assembly Bill 939, Assembly Bill 341, and Senate Bill 1374.** Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. AB 341 requires at least 75 percent of generated waste be source reduced, recycled, or composted by the year 2020. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1,

2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

**Executive Order S-13-08.** Executive Order S-13-08 indicates that “climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California’s economy, to the health and welfare of its population and to its natural resources.” Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resource Agency 2009) was adopted, which is the “... first statewide, multi-sector, region-specific, and information-based climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

**Executive Order B-30-15.** Executive Order B-30-15, establishing a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030, was signed by Governor Brown in April 2015.

**Executive Order B-29-15.** Executive Order B-29-15, mandates a statewide 25% reduction in potable water usage and was signed into law on April 1, 2015.

**Executive Order B-37-16.** Executive Order B-37-16, continuing the State’s adopted water reduction, was signed into law on May 9, 2016. The water reduction builds off the mandatory 25% reduction called for in EO B-29-15.

**Executive Order N-79-20.** Executive Order N-79-20 was signed into law on September 23, 2020 and mandates 100 percent of in-state sales of new passenger cars and trucks be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the state be zero-emission vehicles by 2045 for all operations where feasible and by 2035 for drayage trucks; and to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

## **2.2.4 South Coast Air Quality Management District**

The Project is within the Salton Sea Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD Regulation XXVII currently includes three rules:

- The purpose of Rule 2700 is to define terms and post global warming potentials.
- The purpose of Rule 2701, SoCal Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified greenhouse gas emission reductions in the SCAQMD.
- Rule 2702, Greenhouse Gas Reduction Program, was adopted on February 6, 2009. The purpose of this rule is to create a Greenhouse Gas Reduction Program for greenhouse gas emission reductions in the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

### *SCAQMD Threshold Development*

The SCAQMD has established recommended significance thresholds for greenhouse gases for local lead agency consideration (“SCAQMD draft local agency threshold”). SCAQMD has published a five-tiered draft GHG threshold which includes a 10,000 metric ton of CO<sub>2</sub>e per year for stationary/industrial sources and 3,000 metric tons of CO<sub>2</sub>e per year significance threshold for residential/commercial projects (South Coast Air Quality Management District 2010c). Tier 3 is anticipated to be the primary tier by which the SCAQMD will determine significance for projects. The Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90-percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to CEQA analysis. The 90-percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the SCAQMD’s annual Emissions Reporting Program.

The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether or not the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose but must be consistent. A project’s construction emissions are averaged over 30 years and are added to a project’s operational emissions. If a project’s emissions are under one of the following screening thresholds, then the project is less than significant:
  - All land use types: 3,000 MTCO<sub>2</sub>e per year
  - Based on land use types: residential is 3,500 MTCO<sub>2</sub>e per year; commercial is 1,400 MTCO<sub>2</sub>e per year; and mixed use is 3,000 MTCO<sub>2</sub>e per year
- Tier 4 has the following options:
  - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3: Year 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO<sub>2</sub>e/SP/year for projects and 6.6 MTCO<sub>2</sub>e/SP/year for plans;
  - Option 3, 2035 target: 3.0 MTCO<sub>2</sub>e/SP/year for projects and 4.1 MTCO<sub>2</sub>e/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

## **2.2.5 Local**

### *County of Riverside Climate Action Plan*

The County of Riverside’s Climate Action Plan Update (CAP) was completed in November 2019. The CAP Update describes Riverside County’s GHG emissions for the year 2017, projects how these

emissions will increase into 2020, 2030, and 2050, and includes strategies to reduce emissions to a level consistent with the State of California's emissions reduction targets. The CAP Update sets a target to reduce community-wide GHG emission emissions by 15 percent from 2008 levels by 2020, 49 percent by 2030, and 83 percent by 2050.

Appendix D of the Riverside County CAP Update also states that project's that do not exceed the CAP's screening threshold of 3,000 MTCO<sub>2</sub>e per year are considered to have less than significant GHG emissions and are in compliance with the County's CAP Update. Therefore, to determine whether the project's GHG emissions are significant, this analysis uses the County of Riverside CAP Update screening threshold of 3,000 MTCO<sub>2</sub>e per year for all land use types. Projects that do not exceed emissions of 3,000 MTCO<sub>2</sub>e per year are also required to include the following efficiency measures:

- Energy efficiency matching or exceeding the Title 24 requirements in effect as of January 2017, and
- Water conservation measures that matches the California Green Building Code in effect as of January 2017.

Projects that exceed emissions of 3,000 MTCO<sub>2</sub>e per year are also required to use Screening Tables. Projects that garner at least 100 points will be consistent with the reduction quantities anticipated in the County's CAP Update. Consistent with CEQA Guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions. Those projects that do not garner 100 points using the Screening Tables will need to provide additional analysis to determine the significance of GHG emissions.

In order to meet the state-wide efficiency metric targets, the CAP must demonstrate that it can reduce community-wide emissions to 6.6 MT CO<sub>2</sub>e/SP (or 944,737 MT CO<sub>2</sub>e total based on an estimated 2020 service population of 143,142) by 2020 and 4.4 MT CO<sub>2</sub>e/SP (or 1,334,243 MT CO<sub>2</sub>e based on an estimated 2030 service population of 303,237) by 2030.

Therefore, to determine whether the project's GHG emissions are significant, this analysis uses the County of Riverside CAP Update GHG Screening Tables.

The project will be subject to the latest requirements of the California Green Building and Title 24 Energy Efficiency Standards (currently 2022) which would reduce project-related greenhouse gas emissions.

#### *City of Cathedral City Climate Action Plan*

A Climate Action Plan (CAP) was adopted by the City of Cathedral City in May of 2013. The City of Cathedral City Climate Action Plan was set in place to guide the City in decisions that lead to the largest and most cost-effective emissions reductions. This plan sets forth goals to reduce emissions to achieve

the targets of AB 32. The Climate Action Plan identifies that the community will have to reach a 23.4% reduction from Year 2010 baseline emissions by the year 2020 in order to obtain the AB 32 target emissions. These CAP targets are based on a predicted population growth rate of 19 percent between 2010 and 2020. However, according to the Census Bureau<sup>2</sup>, the population of Cathedral City was estimated to be 51,200 in April 2010 and 55,007 in July 2019; which shows a growth rate of only 7.4 percent.

The City of Cathedral City has identified 77 measures to be implemented over the course of an eight-year period, beginning in 2013, in order to achieve their emission reduction goals. The City promotes energy efficiency and conservation in all areas of community development, including transportation, development planning, and public and private sector construction and operation, as well as in the full range of residential and non-residential projects. The City supports public and private efforts to develop and operate alternative systems of solar and electric production that take advantage of local renewable resources. In addition, the Climate Action Plan discusses the ability to develop and implement a solar ready ordinance that would require all new buildings and homes to be prepared for solar install. The Climate Action Plan also promotes the use of drought tolerate desert landscaping for parks, recreational facilities and golf courses.

Therefore, to determine whether the project's GHG emissions are significant, this analysis uses the County of Riverside GHG Screening Tables.

The project will be subject to the latest requirements of the California Green Building and Title 24 Energy Efficiency Standards (currently 2022) which would reduce project-related greenhouse gas emissions.

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<sup>2</sup> <https://www.census.gov/quickfacts/fact/table/cathedralcitycalifornia,US/PST045219>

## **3.0 Setting**

### **3.1 Existing Physical Setting**

The project site is located in the City of Cathedral City within the County of Riverside, which is part of the Salton Sea Air Basin (SSAB). The middle part of Riverside County (between San Geronio Pass and Joshua Tree National Monument), belongs in the Salton Sea Air Basin (SSAB), along with Imperial County. The SSAB portion of Riverside County is separated from the South Coast Air Basin region by the San Jacinto Mountains and from the Mojave Desert Air Basin to the east by the Little San Bernardino Mountains.

#### **3.1.1 Local Climate and Meteorology**

During the summer, the SSAB is generally influenced by a Pacific Subtropical High Cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The SSAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The SSAB averages between three and seven inches of precipitation per year.

The Coachella Valley is a geographically and meteorologically unique area wholly contained within the Salton Sea Air Basin. The region is currently impacted by significant air pollution levels caused by the transport of pollutants from coastal air basins to the west, primarily ozone, and locally generated PM<sub>10</sub>. The mountains surrounding the region isolate the Valley from coastal influences and create a hot and dry low-lying desert (see Table 3). As the desert heats up it draws cooler coastal air through the narrow San Geronio Pass, generating strong and sustained winds that cross the fluvial (water caused) and aeolian (wind) erosion zones in the Valley. These strong winds suspend and transport large quantities of sand and dust, reducing visibility, damaging property, and constituting a significant health threat.

The temperature and precipitation levels for the City of Palm Springs, closest monitoring station to the project site, are in Table 3. Table 3 shows that July is typically the warmest month and December is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

<Table 3, next page>



**Table 3: Meteorological Summary**

Month	Temperature (°F)		Average Precipitation (inches)
	Average High	Average Low	
January	69.6	42.1	1.14
February	73.6	45.3	1.02
March	79.4	48.6	0.59
April	86.9	54	0.17
May	94.4	60.2	0.05
June	103.1	66.7	0.06
July	108.3	74.8	0.2
August	106.9	74.2	0.3
September	101.8	67.9	0.34
October	91.6	59.2	0.26
November	78.7	48.8	0.47
December	70.1	42.1	0.93
<b>Annual Average</b>	<b>88.7</b>	<b>57</b>	<b>5.53</b>
Notes:			
<sup>1</sup> Source: <a href="https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?caplms+sca">https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?caplms+sca</a>			

### 3.1.2 Local Air Quality

The SCAQMD has divided the South Coast Air Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project is within Source Receptor Area 30, Coachella Valley. SCAQMD operates the Palm Springs air monitoring station approximately 5.1 miles northwest of the project site. The Palm Springs monitoring station was used to collect monitoring data; however, these locations do not provide all ambient weather data. Therefore, additional data was pulled from the SCAQMD historical data for the Coachella Valley Area (Area 30) for both sulfur dioxide and carbon monoxide to provide the existing levels. Table 4 presents the monitored pollutant levels within the vicinity. However, it should be noted that due to the air monitoring station distance from the project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the project site.

<Table 4, next page>

**Table 4: Local Area Air Quality Levels from Palm Springs Air Monitoring Station<sup>1</sup>**

Pollutant (Standard) <sup>2</sup>	Year		
	2020	2021	2022
<b>Ozone:</b>			
Maximum 1-Hour Concentration (ppm)	0.119	0.110	0.106
Days > CAAQS (0.09 ppm)	9	10	7
Maximum 8-Hour Concentration (ppm)	0.094	0.092	0.089
Days > NAAQS (0.07 ppm)	49	35	39
Days > CAAQS (0.070 ppm)	53	38	43
<b>Carbon Monoxide:</b>			
Maximum 1-Hour Concentration (ppm)	0.8	0.8	-
Days > NAAQS (20 ppm)	0	0	-
Maximum 8-Hour Concentration (ppm)	0.5	0.4	-
Days > NAAQS (9 ppm)	0	0	-
<b>Nitrogen Dioxide:</b>			
Maximum 1-Hour Concentration (ppm)	0.047	0.036	0.038
Days > NAAQS (0.25 ppm)	0	0	0
<b>Sulfur Dioxide:<sup>3</sup></b>			
Maximum 1-Hour Concentration (ppm)	-	-	-
Days > CAAQS (0.25 ppm)	-	-	-
<b>Inhalable Particulates (PM10):</b>			
Maximum 24-Hour Concentration (ug/m <sup>3</sup> )	129.8	35.2	159.5
Days > NAAQS (150 ug/m <sup>3</sup> )	0	0	1
Days > CAAQS (50 ug/m <sup>3</sup> )	0	0	3
Annual Average (ug/m <sup>3</sup> )	23.2	18.4	21.1
Annual > NAAQS (50 ug/m <sup>3</sup> )	No	No	No
Annual > CAAQS (20 ug/m <sup>3</sup> )	Yes	No	Yes
<b>Ultra-Fine Particulates (PM2.5):</b>			
Maximum 24-Hour Concentration (ug/m <sup>3</sup> )	23.9	13.5	31.2
Days > NAAQS (35 ug/m <sup>3</sup> )	0	0	0
Annual Average (ug/m <sup>3</sup> )	6.4	6.2	6.3
Annual > NAAQS (15 ug/m <sup>3</sup> )	No	No	No
Annual > CAAQS (12 ug/m <sup>3</sup> )	No	No	No

<sup>1</sup> Source: obtained from <https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year> and /or <https://www.arb.ca.gov/adam/topfour/topfour1.php>.

<sup>2</sup> CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million

<sup>3</sup> No data available.

The monitoring data presented in Table 4 shows that ozone is the air pollutant of primary concern in the project area, which are detailed below.

### Ozone

During the 2020 to 2022 monitoring period, the State 1-hour concentration standard for ozone has been exceeded between seven and ten days each year at the Palm Springs Station. The State 8-hour ozone standard has been exceeded between 38 and 53 days each year over the past three years at the Palm Springs Station. The Federal 8-hour ozone standard has been exceeded between 35 and 49 days each year over the past three years at the Palm Springs Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO<sub>2</sub>, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

### **Carbon Monoxide**

CO is another important pollutant that is due mainly to motor vehicles. During the 2020 to 2022 monitoring period, the Federal 1-hour and 8-hour concentration standards for CO were not exceeded.

### **Nitrogen Dioxide**

During the 2020 to 2022 monitoring period, the Federal 1-hour concentration standard for Nitrogen Dioxide has not been exceeded.

### **Sulfur Dioxide**

The Coachella Valley Area did not have SO<sub>2</sub> data available for the last three years.

### **Particulate Matter**

During the 2020 to 2022 monitoring period, the Palm Springs Station recorded one day of exceedance of the Federal 24-hour PM<sub>10</sub> concentration standard and three days of exceedance in the State PM<sub>10</sub> annual average standard, both in 2022.

During the same period, the Palm Springs Station did not record an exceedance of the Federal 24-hour standard for PM<sub>2.5</sub>.

According to the EPA, some people are much more sensitive than others to breathing fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM<sub>10</sub> and PM<sub>2.5</sub>. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths during exercise.

### **3.1.3 Attainment Status**

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or ‘form’ of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in

attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM<sub>2.5</sub> standard is met if the three-year average of the annual average PM<sub>2.5</sub> concentration is less than or equal to the standard. Table 5 lists the attainment status for the criteria pollutants in the basin.

**Table 5: Coachella Valley Portion of the Salton Sea Air Basin Attainment Status**

<b>Pollutant</b>	<b>Averaging Time</b>	<b>National Standards<sup>1</sup></b>	<b>Attainment Date<sup>2</sup></b>	<b>California Standards<sup>2</sup></b>
1979 1-Hour Ozone <sup>3</sup>	1-Hour (0.12 ppm)	Attainment	11/15/2007 (Attained 12/31/2013)	Nonattainment
	1-Hour (0.09 ppm)	-	-	Nonattainment
2015 8-Hour Ozone <sup>4</sup>	8-Hour (0.070 ppm)	Pending - Expect Nonattainment (Severe)	Pending	Nonattainment
2008 8-Hour Ozone <sup>4</sup>	8-Hour (0.075 ppm)	Nonattainment (Severe-15)	7/20/2027	-
1997 8-Hour Ozone <sup>4</sup>	8-Hour (0.08 ppm)	Nonattainment (Severe-15)	6/15/2019	-
CO	1-Hour (20 ppm) 8-hour (9.0 ppm)	-	-	Attainment
	1-Hour (35 ppm) 8-Hour (9 ppm)	Unclassifiable/ Attainment	N/A (attained)	-
NO <sub>2</sub> <sup>7</sup>	1-hour (0.18 ppm) Annual (0.03 ppm)	-	-	Attainment
	1-Hour (100 ppb) Annual (0.053 ppm)	Unclassifiable/ Attainment	N/A (attained)	-
SO <sub>2</sub> <sup>8</sup>	1-Hour (0.25 ppm) 24-Hour (0.04 ppm)	-	-	Attainment
	1-Hour (75 ppb)	Designations Pending	N/A	-
	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/ Attainment	Unclassifiable/Attainment	
PM <sub>10</sub> <sup>6</sup>	24-Hour (50 µg/m <sup>3</sup> ) Annual (20 50 µg/m <sup>3</sup> )	-	-	Nonattainment
	24-Hour (150 µg/m <sup>3</sup> )	Nonattainment (Serious)	12/31/2006	-
PM <sub>2.5</sub> <sup>5</sup>	Annual (12.0 µg/m <sup>3</sup> )	-	-	Attainment
	24-Hour (35 µg/m <sup>3</sup> )	Unclassifiable/ Attainment	N/A (attained)	-
Lead	3-Months Rolling (0.15 µg/m <sup>3</sup> )	Unclassifiable/ Attainment	Unclassifiable/Attainment	Attainment

**Notes:**

<sup>1</sup> Obtained from 2016 AQMP, SCAQMD, 2016. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassified/Attainment or Unclassifiable.

<sup>2</sup> A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration.

<sup>3</sup> The 1979 1-hour ozone NAAQS (0.12 ppm) was revoked, effective 6/15/05; the Southeast Desert Modified Air Quality Management Area, including the Coachella Valley, had not timely attained this standard by the 11/15/07 "severe-17" deadline, based on 2005-2007 data; on 8/25/14, U.S. EPA proposed a clean data finding based on 2011-2013 data and a determination of attainment for the former 1-hour ozone NAAQS for the Southeast Desert nonattainment area; this rule was finalized by U.S. EPA on 4/15/15, effective 5/15/15, and included preliminary 2014 data

<sup>4</sup> The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm, effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour ozone NAAQS (0.08 ppm) was revoked in the 2008 ozone NAAQS implementation rule, effective 4/6/15; there are continuing obligations under the 1997 and 2008 ozone NAAQS until they are attained

<sup>5</sup> The annual PM<sub>2.5</sub> standard was revised on 1/15/13, effective 3/18/13, from 15 to 12 µg/m<sup>3</sup>

<sup>6</sup> The annual PM<sub>10</sub> standard was revoked, effective 12/18/06; the 24-hour PM<sub>10</sub> NAAQS attainment deadline was 12/31/2006; the Coachella Valley Attainment Re-designation Request and PM<sub>10</sub> Maintenance Plan was postponed by U.S. EPA pending additional monitoring and analysis in the southeastern Coachella Valley

<sup>7</sup> New 1-hour NO<sub>2</sub> NAAQS became effective 8/2/10; attainment designations 1/20/12; annual NO<sub>2</sub> NAAQS retained

<sup>8</sup> The 1971 Annual and 24-hour SO<sub>2</sub> NAAQS were revoked, effective 8/23/10; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO<sub>2</sub> 1-hour standard; final area designations expected by 12/31/2020 with SSAB expected to be designated Unclassifiable/Attainment

## **3.2 Greenhouse Gases**

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), ozone, water vapor, nitrous oxide (N<sub>2</sub>O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agricultural, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO<sub>2</sub> and nitrous oxide (NO<sub>2</sub>) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO<sub>2</sub>, where CO<sub>2</sub> is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. Table 6 provides a description of each of the greenhouse gases and their global warming potential.

Additional information is available: <https://www.arb.ca.gov/cc/inventory/data/data.htm>

<Table 6, next page>

**Table 6: Description of Greenhouse Gases**

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (N <sub>2</sub> O), also known as laughing gas is a colorless gas. It has a lifetime of 114 years. Its global warming potential is 298.	Microbial processes in soil and water, fuel combustion, and industrial processes. In addition to agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N <sub>2</sub> O.
Methane	Methane (CH <sub>4</sub> ) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25.	A natural source of CH <sub>4</sub> is from the decay of organic matter. Methane is extracted from geological deposits (natural gas fields). Other sources are from the decay of organic material in landfills, fermentation of manure, and cattle farming.
Carbon dioxide	Carbon dioxide (CO <sub>2</sub> ) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). They are gases formed synthetically by replacing all hydrogen atoms in methane or methane with chlorine and/or fluorine atoms. Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone, therefore their production was stopped as required by the Montreal Protocol.
Hydrofluorocarbons	Hydrofluorocarbons (HFCs) are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above the Earth's surface. They have a lifetime 10,000 to 50,000 years. They have a global warming potential range of 6,200 to 9,500.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF <sub>6</sub> ) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.
Notes: 1. Sources: Intergovernmental Panel on Climate Change 2014a and Intergovernmental Panel on Climate Change 2014b. <a href="https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html">https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html</a>		

## **4.0 Modeling Parameters and Assumptions**

### **4.1 Construction**

Typical emission rates from construction activities were obtained from CalEEMod Version 2022.1.1.20. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2017 computer program to calculate the emission rates specific for the southwestern portion of Riverside County for construction-related employee vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy truck operations. EMFAC2017 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Using CalEEMod, the peak daily air pollutant emissions were calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions.

The analysis assesses the emissions associated with the construction of the proposed project as indicated in Table 1. The project was analyzed to be operational in 2025; therefore, construction is estimated to start no sooner than the first quarter of 2024 and be completed by 2025. The phases of the construction activities which have been analyzed below are: 1) site preparation, 2) grading, 3) building, 4) paving, and 5) architectural coating. For details on construction modeling and construction equipment for each phase, please see Appendix A.

The project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of the project area (approximately 11.5 acres) and the fact that the project won't export more than 5,000 cubic yards of material a day a Fugitive Dust Control Plan or Large Operation Notification would not be required.

SCAQMD's Rule 403 minimum requirements require that the application of the best available dust control measures are used for all grading operations and include the application of water or other soil stabilizers in sufficient quantity to prevent the generation of visible dust plumes. Compliance with Rule 403 would require the use of water trucks during all phases where earth moving operations would occur. Compliance with Rule 403 is required.

## **4.2 Operations**

Operational or long-term emissions will occur over the life of the project. Both mobile and area sources generate operational emissions. Area source emissions arise from consumer product usage, heaters that consume natural gas, gasoline-powered landscape equipment, and architectural coatings (painting). Mobile source emissions from motor vehicles are the largest single long-term source of air pollutants from the operation of the project. Small amounts of emissions would also occur from area sources such as the consumption of natural gas for heating, hearths, from landscaping emissions, and consumer product usage. The operational emissions were estimated using the latest version of CalEEMod.

### **Mobile Sources**

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project are based upon the trip generation rates given in the Traffic Scoping Agreement (Integrated Engineering Group, 2023) which uses the ITE 11<sup>th</sup> Trip Generation Manual.

The program then applies the emission factors for each trip which is provided by the EMFAC2017 model to determine the vehicular traffic pollutant emissions. The CalEEMod default trip lengths were used in this analysis. Please see CalEEMod output comments sections in Appendix A for details.

### **Area Sources**

Area sources include emissions from consumer products, landscape equipment and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors, generators, and pumps. As specifics were not known about the landscaping equipment fleet, CalEEMod defaults were used to estimate emissions from landscaping equipment.

Per SCAQMD Rule 1113 as amended on June 3, 2011, the architectural coatings that would be applied after January 1, 2014 will be limited to an average of 50 grams per liter or less for buildings and 100 grams per liter or less for parking lot striping; however, no changes were made to the CalEEMod architectural coating default values.

### **Energy Usage**

2022.1.1.20 CalEEMod defaults were utilized.

## **4.3 Localized Construction Analysis**

The SCAQMD has published a “Fact Sheet for Applying CalEEMod to Localized Significance Thresholds” (South Coast Air Quality Management District 2011b). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:



1. The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
2. The maximum number of acres disturbed on the peak day.
3. Any emission control devices added onto off-road equipment.
4. Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The construction equipment showing the equipment associated with the maximum area of disturbance is shown in Table 7.

**Table 7: Construction Equipment Assumptions<sup>1</sup>**

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Site Preparation	Rubber Tired Dozers	3	0.5	1.5
	Tractors/Loaders/Backhoes	4	0.5	2.0
Total Per Phase				3.5
Grading	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Scrapers	2	1.0	2.0
	Tractors/Loaders/Backhoes	2	0.5	1.0
Total Per Phase				4.0
Notes: <sup>1</sup> Source: CalEEMod output and South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. <a href="http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2">http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2</a>				

As shown in Table 7, the maximum number of acres disturbed in a day would be 4.0 acres during grading.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. The emission thresholds were based on the Coachella Valley source receptor area (SRA 30) and a disturbance of 4 acres per day, to be conservative, at a distance of 25 meters (82 feet).

#### 4.4 Localized Operational Analysis

For operational emissions, as the project is approximately 11.5 acres, the screening tables for a disturbance area of 5 acres per day and a distance of 25 meters were used to determine significance. The tables were compared to the project's onsite operational emissions.

## **5.0 Thresholds of Significance**

### **5.1 Air Quality Thresholds of Significance**

#### **5.1.1 CEQA Guidelines for Air Quality**

The CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in the environment.” To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines. A significant impact would occur if the project would:

- a) Conflict with or obstruct implementation of the applicable air quality plan;
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard;
- c) Expose sensitive receptors to substantial pollutant concentrations; or
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, SCAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. There are daily emission thresholds for construction and operation of a proposed project in the basin.

#### **5.1.2 Regional Significance Thresholds for Construction Emissions**

The following CEQA significance thresholds for construction emissions are established for the Basin:

- 75 pounds per day (lbs/day) of VOC
- 100 lbs/day of NO<sub>x</sub>
- 550 lbs/day of CO
- 150 lbs/day of PM<sub>10</sub>
- 55 lbs/day of PM<sub>2.5</sub>
- 150 lbs/day of SO<sub>2</sub>

Projects in the basin with construction-related emissions that exceed any of the emission thresholds are considered to be significant under SCAQMD guidelines.

### 5.1.3 Regional Significance Thresholds for Operational Emissions

The daily operational emissions significance thresholds for the basin are as follows:

- 55 pounds per day (lbs/day) of VOC
- 55 lbs/day of NO<sub>x</sub>
- 550 lbs/day of CO
- 150 lbs/day of PM<sub>10</sub>
- 55 lbs/day of PM<sub>2.5</sub>
- 150 lbs/day of SO<sub>2</sub>

**Local Microscale Concentration Standards** The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

### 5.1.4 Thresholds for Localized Significance

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Salton Sea Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. The SCAQMD has also provided Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The Localized Significant Threshold Methodology found that the primary emissions of concern are NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>.

The emission thresholds were calculated based on the Coachella Valley source receptor area (SRA 30) and a disturbance of 4 acres per day at a distance of 25 meters (82 feet), for construction and 4 acres a day for screening of localized operational emissions. The 4-acre thresholds are interpolated from the 2-acre and 5-acre thresholds.

## 5.2 Greenhouse Gas Thresholds of Significance

### 5.2.1 CEQA Guidelines for Greenhouse Gas

CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in the environment.” To determine if a project would have a significant impact on greenhouse gases, the type, level, and impact of emissions generated by the project must be evaluated.

The following greenhouse gas significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the project would:

- (a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- (b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

However, despite this, currently neither the CEQA statutes, OPR guidelines, nor the draft proposed changes to the CEQA Guidelines prescribe thresholds of significance or a particular methodology for performing an impact analysis; as with most environmental topics, significance criteria are left to the judgment and discretion of the Lead Agency. As previously discussed (Section 2.2.4 of this report), SCAQMD has drafted interim GHG thresholds and the County of Riverside CAP Update has adopted a GHG threshold. The County of Riverside CAP Update screening threshold of 3,000 metric tons per year of CO<sub>2</sub>e was used in this analysis.

### **5.3 Toxic Air Contaminants**

The threshold for toxic air contaminants (TACs) has a maximum incremental cancer risk of 10 per million and a non-cancer (acute and chronic) hazard index of 1.0 or greater. An exceedance to these values would be considered a significant impact.

## 6.0 Air Quality Emissions Impact

### 6.1 Construction Air Quality Emissions Impact

The latest version of CalEEMod was used to estimate the onsite and offsite construction emissions. The emissions incorporate Rule 402 and 403. Rule 402 and 403 (fugitive dust) are not considered mitigation measures as the project by default is required to incorporate these rules during construction.

#### 6.1.1 Regional Construction Emissions

The construction emissions for the Project would not exceed the SCAQMD's daily emission thresholds at the regional level with inclusion of **Mitigation Measure 1** as demonstrated in Table 8, and therefore would be considered less than significant. Mitigation Measure 1 limits interior architectural coatings to a VOC content of 45 grams VOC per liter.

**Table 8: Regional Significance – Mitigated Construction Emissions (pounds/day)**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
<b>Unmitigated</b>						
<b>Site Preparation</b>						
On-Site <sup>2</sup>	3.65	35.95	32.93	0.05	6.71	4.10
Off-Site <sup>3</sup>	0.07	0.11	1.03	0.00	0.23	0.05
<b>Total</b>	<b>3.72</b>	<b>36.06</b>	<b>33.96</b>	<b>0.05</b>	<b>6.94</b>	<b>4.15</b>
<b>Grading</b>						
On-Site <sup>2</sup>	3.52	34.29	30.17	0.06	3.84	2.28
Off-Site <sup>3</sup>	0.08	0.12	1.18	0.00	0.26	0.06
<b>Total</b>	<b>3.60</b>	<b>34.41</b>	<b>31.35</b>	<b>0.06</b>	<b>4.10</b>	<b>2.34</b>
<b>Building Construction</b>						
On-Site <sup>2</sup>	1.20	11.22	13.12	0.02	0.50	0.46
Off-Site <sup>3</sup>	1.04	12.39	19.05	0.01	2.65	0.65
<b>Total</b>	<b>2.24</b>	<b>23.61</b>	<b>32.17</b>	<b>0.03</b>	<b>3.15</b>	<b>1.10</b>
<b>Paving</b>						
On-Site <sup>2</sup>	1.60	7.45	9.98	0.01	0.35	0.32
Off-Site <sup>3</sup>	0.20	0.41	1.58	0.00	0.29	0.07
<b>Total</b>	<b>1.80</b>	<b>7.87</b>	<b>11.56</b>	<b>0.02</b>	<b>0.63</b>	<b>0.39</b>
<b>Architectural Coating</b>						
On-Site <sup>2</sup>	74.73	0.88	1.14	0.00	0.03	0.03
Off-Site <sup>3</sup>	0.19	0.19	3.42	0.00	0.47	0.11
<b>Total</b>	<b>74.92</b>	<b>1.07</b>	<b>4.56</b>	<b>0.00</b>	<b>0.50</b>	<b>0.14</b>
<b>Total of overlapping phases<sup>4</sup></b>	<b>78.96</b>	<b>32.55</b>	<b>48.28</b>	<b>0.05</b>	<b>4.28</b>	<b>1.63</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Thresholds</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>Mitigated</b>						
<b>Site Preparation</b>						
On-Site <sup>2</sup>	3.65	35.95	32.93	0.05	6.71	4.10
Off-Site <sup>3</sup>	0.07	0.11	1.03	0.00	0.23	0.05
<b>Total</b>	<b>3.72</b>	<b>36.06</b>	<b>33.96</b>	<b>0.05</b>	<b>6.94</b>	<b>4.15</b>

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
<b>Grading</b>						
On-Site <sup>2</sup>	3.52	34.29	30.17	0.06	3.84	2.28
Off-Site <sup>3</sup>	0.08	0.12	1.18	0.00	0.26	0.06
<b>Total</b>	<b>3.60</b>	<b>34.41</b>	<b>31.35</b>	<b>0.06</b>	<b>4.10</b>	<b>2.34</b>
<b>Building Construction</b>						
On-Site <sup>2</sup>	1.20	11.22	13.12	0.02	0.50	0.46
Off-Site <sup>3</sup>	1.04	12.39	19.05	0.01	2.65	0.65
<b>Total</b>	<b>2.24</b>	<b>23.61</b>	<b>32.17</b>	<b>0.03</b>	<b>3.15</b>	<b>1.10</b>
<b>Paving</b>						
On-Site <sup>2</sup>	1.60	7.45	9.98	0.01	0.35	0.32
Off-Site <sup>3</sup>	0.20	0.41	1.58	0.00	0.29	0.07
<b>Total</b>	<b>1.80</b>	<b>7.87</b>	<b>11.56</b>	<b>0.02</b>	<b>0.63</b>	<b>0.39</b>
<b>Architectural Coating</b>						
On-Site <sup>2</sup>	69.52	0.88	1.14	0.00	0.03	0.03
Off-Site <sup>3</sup>	0.19	0.19	3.42	0.00	0.47	0.11
<b>Total</b>	<b>69.71</b>	<b>1.07</b>	<b>4.56</b>	<b>0.00</b>	<b>0.50</b>	<b>0.14</b>
<b>Total of overlapping phases<sup>4</sup></b>	<b>73.75</b>	<b>32.55</b>	<b>48.28</b>	<b>0.05</b>	<b>4.28</b>	<b>1.63</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Thresholds</b>	No	No	No	No	No	No
Notes: <sup>1</sup> Source: CalEEMod Version 2022.1.1.20 <sup>2</sup> On-site emissions from equipment operated on-site that is not operated on public roads. <sup>3</sup> Off-site emissions from equipment operated on public roads. <sup>4</sup> Construction, architectural coatings and paving phases may overlap.						

### 6.1.2 Localized Construction Emissions

The data provided in Table 9 shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the proposed project.

**Table 9: Localized Significance – Construction**

Phase	On-Site Pollutant Emissions (pounds/day) <sup>1</sup>			
	NOx	CO	PM10	PM2.5
Site Preparation	35.95	32.93	6.71	4.10
Grading	34.29	30.17	3.84	2.28
Building Construction	11.22	13.12	0.50	0.46
Paving	7.45	9.98	0.35	0.32
Architectural Coating	0.88	1.14	0.03	0.03
Total of overlapping phases	19.56	24.24	0.87	0.80
<b>SCAQMD Threshold for 25 meters (82 feet) or less<sup>2</sup></b>	<b>191</b>	<b>1,299</b>	<b>7</b>	<b>5</b>
Exceeds Threshold?	No	No	No	No
Notes: <sup>1</sup> Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for two acres in Coachella Valley Source Receptor Area (SRA 30). Project will disturb a maximum of 3.5 acres per day (see Table 7). <sup>2</sup> The nearest sensitive receptor is located adjacent to the east; therefore, the 25-meter threshold has been used.				

### **6.1.3 Construction-Related Human Health Impacts**

Regarding health effects related to criteria pollutant emissions, the applicable significance thresholds are established for regional compliance with the state and federal ambient air quality standards, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant. Because regional and local emissions of criteria pollutants during construction of the project would be below the applicable thresholds, it would not contribute to long-term health impacts related to nonattainment of the ambient air quality standards. Therefore, significant adverse acute health impacts as a result of project construction are not anticipated.

### **6.1.4 Odors**

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not reach an objectionable level at the nearest sensitive receptors. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed project.

The SCAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Potential sources that may emit odors during the on-going operations of the proposed project would include odor emissions from vehicle emissions. Due to the distance of the nearest receptors from the project site and through compliance with SCAQMD's Rule 402 no significant impact related to odors would occur during the on-going operations of the proposed project.

### **6.1.5 Construction-Related Toxic Air Contaminant Impact**

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. The Office of Environmental Health Hazard Assessment (OEHHA) has issued the Air Toxic Hot Spots Program Risk Assessment Guidelines and Guidance Manual for the Preparation of Health Risk Assessments, February 2015 to provide a description of the algorithms, recommended exposure variates, cancer and noncancer health values, and the air modeling protocols needed to perform a health risk assessment (HRA) under the Air Toxics Hot Spots Information and Assessment Act of 1987. Hazard identification includes identifying all substances that are evaluated for cancer risk and/or non-cancer acute, 8-hour, and chronic health impacts. In addition, identifying any multi-pathway substances that present a cancer risk or chronic non-cancer hazard via non-inhalation routes of exposure.

Given the relatively limited number of heavy-duty construction equipment and construction schedule, the proposed project would not result in a long-term substantial source of toxic air containment emissions and corresponding individual cancer risk. Furthermore, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project.

## 6.2 Operational Air Quality Emissions Impact

### 6.2.1 Regional Operational Emissions

The operations-related criteria air quality impacts created by the proposed project have been analyzed through the use of CalEEMod model. The operating emissions were based on year 2025, which is the anticipated opening year for the project per the Traffic Scoping Agreement (Integrated Engineering Group). The summer and winter emissions created by the proposed project's long-term operations were calculated and the highest emissions from either summer or winter are summarized in Table 10.

<Table 10, next page>

**Table 10: Regional Significance - Unmitigated Operational Emissions (lbs/day)**

Activity	Pollutant Emissions (pounds/day) <sup>1</sup>					
	VOC	NOx	CO	SO2	PM10	PM2.5
Area Sources <sup>2</sup>	6.81	0.14	14.89	0.00	0.01	0.01
Energy Usage <sup>3</sup>	0.04	0.66	0.28	0.00	0.05	0.05
Mobile Sources <sup>4</sup>	5.37	4.59	40.61	0.09	6.96	1.81
<b>Total Emissions</b>	<b>12.22</b>	<b>5.40</b>	<b>55.78</b>	<b>0.09</b>	<b>7.02</b>	<b>1.87</b>
SCAQMD Thresholds	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Threshold?	No	No	No	No	No	No
Notes: <sup>1</sup> Source: CalEEMod Version 2022.1.1.20 <sup>2</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment. <sup>3</sup> Energy usage consists of emissions from on-site natural gas usage. <sup>4</sup> Mobile sources consist of emissions from vehicles and road dust.						

Table 10 provides the project's unmitigated operational emissions. Table 10 shows that the project does not exceed the SCAQMD daily emission threshold and regional operational emissions are considered to be less than significant.

### 6.2.2 Localized Operational Emissions

Table 11 shows the calculated emissions for the proposed operational activities compared with appropriate LSTs. The LST analysis only includes on-site sources; however, the CalEEMod software



outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 11 include all on-site project-related stationary sources and 10% of the project-related new mobile sources.<sup>3</sup> This percentage is an estimate of the amount of project-related new vehicle traffic that will occur on-site.

<Table 11, next page>

**Table 11: Localized Significance – Unmitigated Operational Emissions**

On-Site Emission Source	On-Site Pollutant Emissions (pounds/day) <sup>1</sup>			
	NOx	CO	PM10	PM2.5
Area Sources <sup>2</sup>	0.14	14.89	0.01	0.01
Energy Usage <sup>3</sup>	0.66	0.28	0.05	0.05
On-Site Vehicle Emissions <sup>4</sup>	0.46	4.06	0.70	0.18
<b>Total Emissions</b>	<b>1.26</b>	<b>19.23</b>	<b>0.76</b>	<b>0.24</b>
<b>SCAQMD Threshold for 25 meters (82 feet)<sup>5</sup></b>	<b>304</b>	<b>2,292</b>	<b>4</b>	<b>2</b>
Exceeds Threshold?	No	No	No	No
Notes: <sup>1</sup> Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 5 acres in Coachella Valley Source Receptor Area (SRA 30). The project will be approximately 11.49 acres. <sup>2</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment. <sup>3</sup> Energy usage consists of emissions from generation of electricity and on-site natural gas usage. <sup>4</sup> On-site vehicular emissions based on 1/10 of the gross vehicular emissions and road dust. <sup>5</sup> The nearest sensitive receptor is located adjacent to the east; therefore, the 25-meter threshold has been used.				

Table 11 indicates that the local operational emission would not exceed the LST thresholds at the nearest sensitive receptors, located adjacent to the project. Therefore, the project will result in less than significant Localized Operational emissions.

<sup>3</sup> The project site is approximately 0.2 miles in length at its longest point; therefore the on-site mobile source emissions represent approximately 1/34th of the shortest CalEEMod default distance of 6.9 miles. Therefore, to be conservative, 1/10th the distance (dividing the mobile source emissions by 10) was used to represent the portion of the overall mobile source emissions that would occur on-site.

### **6.2.3 Operations-Related Human Health Impacts**

As stated previously, regarding health effects related to criteria pollutant emissions, the applicable significance thresholds are established for regional compliance with the state and federal ambient air quality standards, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant. Because regional and local emissions of criteria pollutants during operation of the project would be below the applicable thresholds, it would not contribute to long-term health impacts related to nonattainment of the ambient air quality standards. Therefore, less than significant adverse acute health impacts as a result of project operation are anticipated.

### **6.3 CO Hot Spot Emissions**

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented in above in Section 5.0.

To determine if the proposed project could cause emission levels in excess of the CO standards discussed above in Section 5.0, a sensitivity analysis is typically conducted to determine the potential for CO “hot spots” at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, “hot spots” potentially can occur at high traffic volume intersections with a Level of Service E or worse.

Micro-scale air quality emissions have traditionally been analyzed in environmental documents where the air basin was a non-attainment area for CO. However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no “hot spots” anywhere in the air basin, even at intersections with much higher volumes, much worse congestion, and much higher background CO levels than anywhere in Riverside County. If the worst-case intersections in the air basin have no “hot spot” potential, any local impacts will be below thresholds.

Traffic analysis from Integrated Engineering Group (2023) showed that the project would generate 1,375 average daily trips. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. The volume of traffic at project buildout would be well below 100,000 vehicles and below the necessary volume to even get close to causing a violation of the CO standard. Therefore, no CO “hot spot” modeling was performed and less than significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed project.

### **6.4 Cumulative Regional Air Quality Impacts**

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis

would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the project's air quality must be generic by nature.

The project area is out of attainment for both ozone and PM10 particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the Salton Sea Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. The project does not exceed any of the thresholds of significance and therefore is considered less than significant.

## **6.5 Air Quality Compliance**

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

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

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

- (1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- (2) Whether the project will exceed the assumptions in the AQMP in 2022 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

**A. Criterion 1 - Increase in the Frequency or Severity of Violations**

Based on the air quality modeling analysis contained in this Air Analysis in Tables 8 and 9, short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. This Air Analysis also found that, long-term operations impacts will not result in significant impacts based on the SCAQMD local and regional thresholds of significance, shown in Tables 10 and 11.

Therefore, the proposed project is not projected to contribute to the exceedance of any air pollutant concentration standards or to cause a delay in attainment for any pollutant and is found to be consistent with the AQMP for the first criterion.

**B. Criterion 2 - Exceed Assumptions in the AQMP?**

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. Connect SoCal, the 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy prepared by SCAG, includes chapters on: SoCal today, paying our way forward, and the path to greater mobility and sustainability. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this project, the City of Cathedral City defines the assumptions that are represented in the AQMP.

The proposed project has a current land use designation of General Commercial (CG) according to the City of Cathedral City Official General Plan and is zoned Planned Community Commercial (PCC) in the City of Cathedral City Code of Ordinances. The proposed project is to develop the site with an apartment complex. Under the current zoning, allowable uses include restaurants, bars, hotels, and retail, which would all have the potential to generate more trips than a residential use and therefore more emissions.<sup>4</sup> As such, a General Plan amendment to accommodate for the project would result in less emissions than originally planned for in the AQMP. Therefore, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and would be found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur.

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<sup>4</sup> ITE Trip Generation Manual, 11th Edition (2021)

## 7.0 Greenhouse Gas Impact Analysis

### 7.1 Construction Greenhouse Gas Emissions Impact

The greenhouse gas emissions from project construction equipment and worker vehicles are shown in Table 12. The emissions are from all phases of construction. The total construction emissions amortized over a period of 30 years are estimated at 32.25 metric tons of CO<sub>2</sub>e per year. Annual CalEEMod output calculations are provided in Appendix A.

**Table 12: Construction Greenhouse Gas Emissions**

Activity	Emissions (MTCO <sub>2</sub> e) <sup>1</sup>		
	Onsite	Offsite	Total
Site Preparation	24.10	1.11	25.21
Grading	90.10	3.81	93.90
Building Construction	328.17	495.89	824.06
Paving	13.76	4.85	18.61
Coating	1.22	4.45	5.66
<b>Total</b>	<b>457.34</b>	<b>510.11</b>	<b>967.45</b>
<b>Averaged over 30 years<sup>2</sup></b>	<b>15.24</b>	<b>17.00</b>	<b>32.25</b>
Notes:			
<sup>1</sup> . MTCO <sub>2</sub> e=metric tons of carbon dioxide equivalents (includes carbon dioxide, methane and nitrous oxide).			
<sup>2</sup> . The emissions are averaged over 30 years because the average is added to the operational emissions, pursuant to SCAQMD.			
* CalEEMod output (Appendix A)			

### 7.2 Operational Greenhouse Gas Emissions Impact

Operational emissions occur over the life of the project. The operational emissions for the project are 1,991 metric tons of CO<sub>2</sub>e per year (see Table 13). Furthermore, as shown in Table 13, the project's total emissions (with incorporation of construction related GHG emissions) would be 2,023 metric tons of CO<sub>2</sub>e per year. These emissions would not exceed the County of Riverside CAP Update and SCAQMD screening threshold of 3,000 metric tons of CO<sub>2</sub>e per year. Therefore, the project's GHG emissions impact would be less than significant.

<Table 13 next page>

**Table 13: Opening Year Unmitigated Project-Related Greenhouse Gas Emissions**

Category	Greenhouse Gas Emissions (Metric Tons/Year) <sup>1</sup>					
	Bio-CO <sub>2</sub>	NonBio-CO <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Area Sources <sup>2</sup>	0.00	3.65	3.65	0.00	0.00	3.66
Energy Usage <sup>3</sup>	0.00	523.54	523.54	0.04	0.00	525.38
Mobile Sources <sup>4</sup>	0.00	1,368.20	1,368.20	0.06	0.07	1,393.00
Solid Waste <sup>5</sup>	13.46	0.00	13.46	1.35	0.00	47.10
Water <sup>6</sup>	2.63	10.14	12.77	0.27	0.01	21.47
Construction <sup>7</sup>	0.00	31.82	31.82	0.00	0.00	32.25
<b>Total Emissions</b>	16.09	1,937.35	1,953.45	1.72	0.08	<b>2,022.86</b>
<b>County of Riverside CAP and SCAQMD Draft Screening Threshold</b>						<b>3,000</b>
<b>Exceeds Threshold?</b>						<b>No</b>
Notes: <sup>1</sup> Source: CalEEMod Version 2022.1.1.20 <sup>2</sup> Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment. <sup>3</sup> Energy usage consist of GHG emissions from electricity and natural gas usage. <sup>4</sup> Mobile sources consist of GHG emissions from vehicles. <sup>5</sup> Solid waste includes the CO <sub>2</sub> and CH <sub>4</sub> emissions created from the solid waste placed in landfills. <sup>6</sup> Water includes GHG emissions from electricity used for transport of water and processing of wastewater. <sup>7</sup> Construction GHG emissions based on a 30 year amortization rate.						

### 7.3 Greenhouse Gas Plan Consistency

The proposed project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. As stated previously, the County of Riverside has adopted a Climate Action Plan; therefore, the project and its GHG emissions have been compared to the goals of the County of Riverside CAP Update.

#### *Consistency with the County of Riverside CAP Update*

Per the County's CAP Update, the County adopted its first CAP in 2015 which set a target to reduce emissions back to 1990 levels by the year 2020 as recommended in the AB 32 Scoping Plan. Furthermore, the goals and supporting measures within the County's CAP Update are proposed to reflect and ensure compliance with changes in the local and State policies and regulations such as SB 32 and California's 2017 Climate Change Scoping Plan. Therefore, compliance with the County's CAP in turn reflects consistency with the goals of the CARB Scoping Plan, Assembly Bill (AB) 32 and Senate Bill (SB) 32.

Appendix D of the Riverside County CAP Update also states that project's that do not exceed the CAP's screening threshold of 3,000 MTCO<sub>2</sub>e per year are considered to have less than significant GHG emissions and are in compliance with the County's CAP Update. According to the County's CAP Update, projects that do not exceed emissions of 3,000 MTCO<sub>2</sub>e per year are also required to include the following efficiency measures:

- Energy efficiency matching or exceeding the Title 24 requirements in effect as of January 2017, and

- Water conservation measures that matches the California Green Building Code in effect as of January 2017.

As stated above, the GHG emissions generated by the proposed project would not exceed the County of Riverside CAP Update screening threshold of 3,000 metric tons per year of CO<sub>2</sub>e.

#### *City of Cathedral City Climate Action Plan*

The City of Cathedral City CAP was adopted in May of 2013. The City of Cathedral City CAP was set in place to guide the City in decisions that lead to the largest and most cost-effective emissions reductions. This plan sets forth goals to reduce emissions to achieve the targets of AB 32. In order to achieve these targets, the CAP presents a number of GHG emissions-reducing programs and policies that are to be implemented by the City. These emissions-reducing measures have been provided for different sectors of the community including transportation, residential buildings, commercial buildings, government incentives, renewable energy, cross-cutting initiatives, solid waste, and water. As specified in the CAP, these measures are to be implemented in a series of three phases over a course of eight years beginning in 2013. The proposed project would be expected to comply with all applicable emissions-reducing measures identified within the CAP.

Project consistency with applicable measures in the CAP has been assessed. As shown in Table 14, the project is consistent with the applicable measures identified in the CAP. In addition, the proposed project is consistent with the GHG inventory and forecast prepared for the CAP as both the existing and the projected GHG inventories were derived based on the land use designations and associated densities defined in the City's General Plan, and the proposed project is consistent with the existing General Plan land use designations. Therefore, since the proposed project is consistent with the City's General Plan and CAP, the project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Impacts are considered to be less than significant.

<Table 14, next page>

**Table 14: City of Cathedral City CAP Applicable Measures Project Comparison**

Sector	CAP Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Sphere - "Where We Live"		
Solid Waste	Solid Waste Diversion: Increase solid waste diversion rate to achieve an average annual goal of 65% through 2020.	Consistent. The project will be required to comply with AB 341 which includes recycling programs that reduces waste to landfills by up to 75% by 2020.
Water	Landscaper Certification: Require all licensed landscapers to be certified by CVAG	Consistent. Landscapers used during the project shall be certified by CVAG.
Water	Gray water-Ready Ordinance: Require all new residential development to be constructed for easy implementation of gray water systems that redirect water from wash basins, showers, and tubs.	Consistent. The project shall be built gray water-ready.
Sphere - "How We Build"		
Residential Buildings	Shade Trees: Promote properly sited and selected shade trees in 100% of new construction to reduce heat islands and provide shade to offset air conditioning	Consistent. The project will comply with current 2022 Title 24 requirements to meet energy compliance.
Government Initiatives	Green Building Program: Promote the voluntary Green Building Program to prepare for enhanced Title 24 requirements and green building standards.	Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that became mandatory in the 2010 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The Proposed Project would be subject to these mandatory standards. The 2014 Title 24 Code contained regulations that would be 25% more efficient than the 2010 edition of the Code, and the 2016 Title 24 Code is 5% more efficient than the 2014 edition of the Code in terms of nonresidential buildings. The 2022 Title 24 Code builds on the 2016 Code.
Notes: a. Source: City of Cathedral City Climate Action Plan (2013).		



## 8.0 Energy Analysis

Information from the CalEEMod 2022.1.1.20 Daily and Annual Outputs contained in the air quality and greenhouse gas analyses above was utilized for this analysis. The CalEEMod outputs detail project related construction equipment, transportation energy demands, and facility energy demands. As shown in this Section, the project will not result in wasteful or inefficient use of energy and will therefore have a less than significant impact in regards to energy usage.

### 8.1 Construction Energy Demand

#### 8.1.1 Construction Equipment Electricity Usage Estimates

Electrical service will be provided by Southern California Edison (SCE). Based on the 2017 National Construction Estimator, Richard Pray (2017)<sup>5</sup>, the typical power cost per 1,000 square feet of building construction per month is estimated to be \$2.32. The project plans to develop the site with approximately 300,660 square feet of new residential development over the course of approximately 18 months. Based on Table 15, the total power cost of the on-site electricity usage during the construction of the proposed project is estimated to be approximately \$12,556. As shown in Table 15, the total electricity usage from Project construction related activities is estimated to be approximately 228,283 kWh.<sup>6</sup>

**Table 15: Project Construction Power Cost and Electricity Usage**

Power Cost (per 1,000 square foot of building per month of construction)	Total Building Size (1,000 Square Foot) <sup>1</sup>	Construction Duration (months)	Total Project Construction Power Cost
\$2.32	300.660	18	\$12,555.56

Cost per kWh	Total Project Construction Electricity Usage (kWh)
\$0.06	228,283

\* Assumes the project will be under the GS-1 General Service rate under SCE.

<sup>5</sup> Pray, Richard. 2017 National Construction Estimator. Carlsbad: Craftsman Book Company, 2017.

<sup>6</sup> LADWP's Small Commercial & Multi-Family Service (A-1) is approximately \$0.06 per kWh of electricity Southern California Edison (SCE). Rates & Pricing Choices: General Service/Industrial Rates. [https://library.sce.com/content/dam/sce-doclib/public/regulatory/historical/electric/2020/schedules/general-service-&-industrial-rates/ELECTRIC\\_SCHEDULES\\_GS-1\\_2020.pdf](https://library.sce.com/content/dam/sce-doclib/public/regulatory/historical/electric/2020/schedules/general-service-&-industrial-rates/ELECTRIC_SCHEDULES_GS-1_2020.pdf)

## 8.1.2 Construction Equipment Fuel Estimates

Using the CalEEMod data input, the project's construction phase would consume electricity and fossil fuels as a single energy demand, that is, once construction is completed their use would cease. CARB's 2017 Emissions Factors Tables show that on average aggregate fuel consumption (gasoline and diesel fuel) would be approximately 18.5 hp-hr-gal.<sup>7</sup> As presented in Table 16 below, project construction activities would consume an estimated 46,135 gallons of diesel fuel.

**Table 16: Construction Equipment Fuel Consumption Estimates**

Phase	Number of Days	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	HP hrs/day	Total Fuel Consumption (gal diesel fuel) <sup>1,2</sup>
Site Preparation	10	Rubber Tired Dozers	3	8	367	0.4	3,523	1,904
	10	Tractors/Loaders/Backhoes	4	8	84	0.37	995	538
Grading	30	Excavators	2	8	36	0.38	219	355
	30	Graders	1	8	148	0.41	485	787
	30	Rubber Tired Dozers	1	8	367	0.4	1,174	1,904
	30	Scrapers	2	8	423	0.48	3,249	5,268
	30	Tractors/Loaders/Backhoes	2	8	84	0.37	497	806
	300	Cranes	1	7	367	0.29	745	12,081
Building Construction	300	Forklifts	3	8	82	0.2	394	6,383
	300	Generator Sets	1	8	14	0.74	83	1,344
	300	Tractors/Loaders/Backhoes	3	7	84	0.37	653	10,584
	300	Welders	1	8	46	0.45	166	2,685
	20	Pavers	2	8	81	0.42	544	588
Paving	20	Paving Equipment	2	8	89	0.36	513	554
	20	Rollers	2	8	36	0.38	219	237
Architectural Coating	20	Air Compressors	1	6	37	0.48	107	115
<b>CONSTRUCTION FUEL DEMAND (gallons of diesel fuel)</b>								<b>46,135</b>

Notes:

<sup>1</sup>Using Carl Moyer Guidelines Table D-21 Fuel consumption rate factors (bhp-hr/gal) for engines less than 750 hp.

(Source: [https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017\\_gl\\_appendix\\_d.pdf](https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf))

<sup>2</sup>Discrepancies are due to rounding.

<sup>7</sup> Aggregate fuel consumption rate for all equipment was estimated at 18.5 hp-hr/day (from CARB's 2017 Emissions Factors Tables and fuel consumption rate factors as shown in Table D-21 of the Moyer Guidelines: [https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017\\_gl\\_appendix\\_d.pdf](https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf)).

### 8.1.3 Construction Worker Fuel Estimates

It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated VMT, the construction worker trips would generate an estimated 1,027,370 VMT. Vehicle fuel efficiencies for construction workers were estimated in the air quality and greenhouse gas analysis using information generated using CARB's EMFAC model (see Appendix B for details). Table 17 shows that an estimated 33,195 gallons of fuel would be consumed for construction worker trips.

**Table 17: Construction Worker Fuel Consumption Estimates**

Phase	Number of Days	Worker Trips/Day	Trip Length (miles) <sup>1</sup>	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons) <sup>2</sup>
Site Preparation	10	18	18.5	3,238	30.95	105
Grading	30	20	18.5	11,100	30.95	359
Building Construction	300	179	18.5	994,227	30.95	32,124
Paving	20	15	18.5	5,550	30.95	179
Architectural Coating	20	36	18.5	13,256	30.95	428
<b>Total Construction Worker Fuel Consumption</b>						<b>33,195</b>

Notes:

<sup>1</sup>Assumptions for the worker trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.20 defaults.

<sup>2</sup>Discrepancies are due to rounding.

### 8.1.4 Construction Vendor/Hauling Fuel Estimates

Tables 18 and 19 show the estimated fuel consumption for vendor and hauling during building construction and architectural coating. With respect to estimated VMT, the vendor trips would generate an estimated 105,249 VMT. No hauling trips are anticipated as no demolition is required and the cut and fill of soil required for grading will balance. For the architectural coatings it is assumed that the contractors would be responsible for bringing coatings and equipment with them in their light duty vehicles.<sup>8</sup> Tables 18 and 19 show that an estimated 11,637 gallons of fuel would be consumed for vendor and hauling trips.

<Tables 18 & 19, next page>

<sup>8</sup> Vendors delivering construction material or hauling debris from the site during grading would use medium to heavy duty vehicles with an average fuel consumption of 9.22 mpg for medium heavy-duty trucks and 6.74 mpg for heavy heavy-duty trucks (see Appendix D for details).

**Table 18: Construction Vendor Fuel Consumption Estimates (MHD Trucks)<sup>1</sup>**

Phase	Number of Days	Vendor Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Site Preparation	10	0	10.2	0	9.22	0
Grading	30	0	10.2	0	9.22	0
Building Construction	300	34	10.2	105,249	9.22	11,415
Paving	20	10	10.2	2,040	9.22	221
Architectural Coating	20	0	10.2	0	9.22	0
<b>Total Vendor Fuel Consumption</b>						<b>11,637</b>

Notes:

<sup>1</sup> Assumptions for the vendor trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.20 defaults.

**Table 19: Construction Hauling Fuel Consumption Estimates (HHD Trucks)<sup>1</sup>**

Phase	Number of Days	Hauling Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Site Preparation	10	0	20	0	6.74	0
Grading	30	0	20	0	6.74	0
Building Construction	300	0	20	0	6.74	0
Paving	20	0	20	0	6.74	0
Architectural Coating	20	0	20	0	6.74	0
<b>Total Construction Hauling Fuel Consumption</b>						<b>0</b>

Notes:

<sup>1</sup> Assumptions for the hauling trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.20 defaults.

### 8.1.5 Construction Energy Efficiency/Conservation Measures

Construction equipment used over the approximately 18-month construction phase would conform to CARB regulations and California emissions standards and is evidence of related fuel efficiencies. In addition, the CARB Airborne Toxic Control Measure limits idling times of construction vehicles to no more than five minutes, thereby minimizing unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Furthermore, the project has been designed in compliance with California's Energy Efficiency Standards and 2022 CALGreen Standards.

Construction of the proposed residential development would require the typical use of energy resources. 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 and a less than significant impact.

## 8.2 Operational Energy Demand

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

### 8.2.1 Transportation Fuel Consumption

The largest source of operational energy use would be vehicle operation of customers. The site is located in an urbanized area just in close proximity to transit stops. Using the CalEEMod output, it is assumed that an average trip for autos were assumed to be 16.6 miles, light trucks were assumed to travel an average of 6.9 miles, and 3- 4-axle trucks were assumed to travel an average of 8.4 miles<sup>9</sup>. To show a worst-case analysis, as the proposed project is a residential project, it was assumed that vehicles would operate 365 days per year. Table 20 shows the worst-case estimated annual fuel consumption for all classes of vehicles from autos to heavy-heavy trucks.<sup>10</sup> Table 20 shows that an estimated 227,488 gallons of fuel would be consumed per year for the operation of the proposed project.

**Table 20: Estimated Vehicle Operations Fuel Consumption**

Vehicle Type	Vehicle Mix	Number of Vehicles	Average Trip (miles) <sup>1</sup>	Daily VMT	Average Fuel Economy (mpg)	Total Gallons per Day	Total Annual Fuel Consumption (gallons)
Light Auto	Automobile	759.4	16.6	12,606	31.82	396.16	144,597
Light Truck	Automobile	79.5	6.9	549	27.16	20.21	7,376
Light Truck	Automobile	245.1	6.9	1,691	25.6	66.07	24,114
Medium Truck	Automobile	200.2	6.9	1,381	20.81	66.38	24,229
Light Heavy Truck	2-Axle Truck	37.8	8.4	317	13.81	22.97	8,384
Light Heavy Truck 10,000 lbs +	2-Axle Truck	10.4	8.4	87	14.18	6.15	2,244
Medium Heavy Truck	3-Axle Truck	16.1	8.4	135	9.58	14.10	5,147
Heavy Heavy Truck	4-Axle Truck	26.5	8.4	223	7.14	31.22	11,397
Total		1,375	--	16,990	--	623.25	--
<b>Total Annual Fuel Consumption</b>							<b>227,488</b>

Notes:

<sup>1</sup> The trip generation assessment, the project is to generate 1,375 total net new trips after reduction of existing uses. Default CalEEMod vehicle fleet mix utilized.

<sup>2</sup>Based on the size of the site and relative location, trips were assumed to be local rather than regional.

Trip generation generated by the proposed project are consistent with other similar residential uses of similar scale and configuration as reflected in the traffic analysis (Integrated Engineering Group, 2023). That is, the proposed project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips, nor associated excess and wasteful vehicle energy consumption.

<sup>9</sup> CalEEMod default distance for H-W (home-work) or C-W (commercial-work) is 16.6 miles; 6.9 miles for H-S (home-shop) or C-C (commercial-customer); and 8.4 miles for H-O (home-other) or C-O (commercial-other).

<sup>10</sup> Average fuel economy based on aggregate mileage calculated in EMFAC 2017 for opening year (2023). See Appendix D for EMFAC output.

Therefore, project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

### 8.2.2 Facility Energy Demands (Electricity and Natural Gas)

The annual natural gas and electricity demands were provided per the CalEEMod output and are provided in Table 21.

**Table 21: Project Unmitigated Annual Operational Energy Demand Summary<sup>1</sup>**

Natural Gas Demand	kBTU/year
Apartments Mid Rise	2,630,134
<b>Total</b>	<b>2,630,134</b>
Electricity Demand	kWh/year
Apartments Mid Rise	1,154,468
Garages	268,910
Parking Lot	167,898
<b>Total</b>	<b>1,591,276</b>

Notes:

<sup>1</sup>Taken from the CalEEMod 2022.1.1.20 annual output.

As shown in Table 21, the estimated electricity demand for the proposed project is approximately 1,591,276 kWh per year. In 2022, the residential sector of the County of Riverside consumed approximately 9,061 million kWh of electricity.<sup>11</sup> In addition, the estimated natural gas consumption for the proposed project is approximately 2,630,134 kBTU per year. In 2022, the nonresidential sector of the County of Riverside consumed approximately 284 million therms of gas.<sup>12</sup> Therefore, the increase in both electricity and natural gas demand from the proposed project is insignificant compared to the County's 2022 demand.

### 8.3 Renewable Energy and Energy Efficiency Plan Consistency

Regarding federal transportation regulations, the project site is located in an already developed area. Access to/from the project site is from existing roads. These roads are already in place so the project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be proposed pursuant to the ISTEPA because SCAG is not planning for intermodal facilities in the project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, the applicant is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by the SCE and Southern California Gas Company.

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<sup>11</sup> California Energy Commission, Electricity Consumption by County. <https://ecdms.energy.ca.gov/elecbycounty.aspx>

<sup>12</sup> California Energy Commission, Gas Consumption by County. <http://ecdms.energy.ca.gov/gasbycounty.aspx>

Regarding the State's Renewable Energy Portfolio Standards, the project would be required to meet or exceed the energy standards established in the California Green Building Standards Code, Title 24, Part 11 (CALGreen). CalGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials.

The project will be consistent with all relevant renewable energy and energy efficiency plans and will therefore have a less than significant impact.

## **9.0 References**

The following references were used in the preparing this analysis.

### **California Air Pollution Control Officers Association**

2009 Health Risk Assessments for Proposed Land Use Projects

### **California Air Resources Board**

2008 Resolution 08-43

2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act

2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions

2008 Climate Change Scoping Plan, a framework for change.

2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document

2014 First Update to the Climate Change Scoping Plan, Building on the Framework Pursuant to AB32, the California Global Warming Solutions Act of 2006. May.

2018 Historical Air Quality, Top 4 Summary

### **City of Cathedral City**

2013 City of Cathedral City General Plan.

### **County of Riverside**

2015 County of Riverside General Plan. December 8.

2019 County of Riverside Climate Action Plan Update. November.

### **Governor's Office of Planning and Research**

2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2009 CEQA Guideline Sections to be Added or Amended

### **Integrated Engineering Group**

2023 Scoping Agreement for Date Palm Apartments Project. September 22.



**Office of Environmental Health Hazard Assessment**

2015 Air Toxics Hot Spots Program Risk Assessment Guidelines

**South Coast Air Quality Management District**

1993 CEQA Air Quality Handbook

2005 Rule 403 Fugitive Dust

2007 2007 Air Quality Management Plan

2008 Final Localized Significance Threshold Methodology, Revised

2011 Appendix A Calculation Details for CalEEMod

2012 Final 2012 Air Quality Management Plan

2016 Final 2016 Air Quality Management Plan

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CalEEMod Output

# Date Palm Apartments Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Date Palm Apartments
Construction Start Date	1/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	10.0
Location	33.82807900321953, -116.45758115132628
County	Riverside-Salton Sea
City	Cathedral City
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5673
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

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

Apartments Mid Rise	204	Dwelling Unit	5.37	223,860	0.00	—	659	—
Parking Lot	4.40	Acre	4.40	0.00	45,000	—	—	—
Enclosed Parking Structure	192	Space	1.73	76,800	0.00	—	—	—

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-13	Use Low-VOC Paints for Construction

## 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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	75.0	13.4	32.2	0.03	0.51	2.64	3.15	0.47	0.63	1.10	—	6,224	6,224	0.21	0.26	13.1	6,320
Mit.	69.7	13.4	32.2	0.03	0.51	2.64	3.15	0.47	0.63	1.10	—	6,224	6,224	0.21	0.26	13.1	6,320
% Reduced	7%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.72	36.1	34.0	0.06	1.60	19.9	21.5	1.47	10.2	11.6	—	6,856	6,856	0.28	0.26	0.34	6,882
Mit.	3.72	36.1	34.0	0.06	1.60	5.34	6.94	1.47	2.68	4.15	—	6,856	6,856	0.28	0.26	0.34	6,882
% Reduced	—	—	—	—	—	73%	68%	—	74%	64%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.73	11.2	18.2	0.02	0.44	2.75	3.20	0.41	0.93	1.33	—	3,980	3,980	0.15	0.15	3.15	4,032
Mit.	4.44	11.2	18.2	0.02	0.44	1.79	2.24	0.41	0.50	0.91	—	3,980	3,980	0.15	0.15	3.15	4,032
% Reduced	6%	—	—	—	—	35%	30%	—	46%	32%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.86	2.04	3.32	< 0.005	0.08	0.50	0.58	0.07	0.17	0.24	—	659	659	0.02	0.02	0.52	668
Mit.	0.81	2.04	3.32	< 0.005	0.08	0.33	0.41	0.07	0.09	0.17	—	659	659	0.02	0.02	0.52	668
% Reduced	6%	—	—	—	—	35%	30%	—	46%	32%	—	—	—	—	—	—	—

## 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.24	13.4	32.2	0.03	0.51	2.64	3.15	0.47	0.63	1.10	—	6,224	6,224	0.21	0.26	13.1	6,320
2025	75.0	12.5	30.6	0.03	0.45	2.64	3.08	0.41	0.63	1.04	—	6,146	6,146	0.21	0.25	12.2	6,240
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.72	36.1	34.0	0.06	1.60	19.9	21.5	1.47	10.2	11.6	—	6,856	6,856	0.28	0.26	0.34	6,882
2025	1.87	12.7	23.3	0.03	0.45	2.64	3.08	0.41	0.63	1.04	—	5,751	5,751	0.22	0.25	0.32	5,832
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.55	11.2	18.2	0.02	0.44	2.75	3.20	0.41	0.93	1.33	—	3,980	3,980	0.15	0.15	3.15	4,032
2025	4.73	3.99	7.95	0.01	0.15	0.77	0.91	0.13	0.18	0.32	—	1,786	1,786	0.07	0.07	1.55	1,812

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.28	2.04	3.32	< 0.005	0.08	0.50	0.58	0.07	0.17	0.24	—	659	659	0.02	0.02	0.52	668
2025	0.86	0.73	1.45	< 0.005	0.03	0.14	0.17	0.02	0.03	0.06	—	296	296	0.01	0.01	0.26	300

## 2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.24	13.4	32.2	0.03	0.51	2.64	3.15	0.47	0.63	1.10	—	6,224	6,224	0.21	0.26	13.1	6,320
2025	69.7	12.5	30.6	0.03	0.45	2.64	3.08	0.41	0.63	1.04	—	6,146	6,146	0.21	0.25	12.2	6,240
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.72	36.1	34.0	0.06	1.60	5.34	6.94	1.47	2.68	4.15	—	6,856	6,856	0.28	0.26	0.34	6,882
2025	1.87	12.7	23.3	0.03	0.45	2.64	3.08	0.41	0.63	1.04	—	5,751	5,751	0.22	0.25	0.32	5,832
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.55	11.2	18.2	0.02	0.44	1.79	2.24	0.41	0.50	0.91	—	3,980	3,980	0.15	0.15	3.15	4,032
2025	4.44	3.99	7.95	0.01	0.15	0.77	0.91	0.13	0.18	0.32	—	1,786	1,786	0.07	0.07	1.55	1,812
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.28	2.04	3.32	< 0.005	0.08	0.33	0.41	0.07	0.09	0.17	—	659	659	0.02	0.02	0.52	668
2025	0.81	0.73	1.45	< 0.005	0.03	0.14	0.17	0.02	0.03	0.06	—	296	296	0.01	0.01	0.26	300

## 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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
---------	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.2	5.05	55.8	0.09	0.13	6.90	7.02	0.12	1.75	1.87	97.2	12,127	12,224	10.4	0.48	31.0	12,658
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.48	5.26	29.2	0.08	0.12	6.90	7.01	0.11	1.75	1.86	97.2	11,103	11,200	10.4	0.49	2.37	11,610
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.6	5.13	39.6	0.09	0.12	6.85	6.97	0.12	1.74	1.85	97.2	11,510	11,607	10.4	0.49	14.3	12,025
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.93	0.94	7.23	0.02	0.02	1.25	1.27	0.02	0.32	0.34	16.1	1,906	1,922	1.72	0.08	2.37	1,991

## 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.37	4.25	40.6	0.09	0.06	6.90	6.96	0.06	1.75	1.81	—	8,858	8,858	0.38	0.43	29.4	9,024
Area	6.81	0.14	14.9	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.7	44.7	< 0.005	< 0.005	—	44.8
Energy	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	3,162	3,162	0.22	0.02	—	3,173
Water	—	—	—	—	—	—	—	—	—	—	15.9	61.3	77.2	1.63	0.04	—	130
Waste	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Total	12.2	5.05	55.8	0.09	0.13	6.90	7.02	0.12	1.75	1.87	97.2	12,127	12,224	10.4	0.48	31.0	12,658

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.22	4.59	28.9	0.08	0.06	6.90	6.96	0.06	1.75	1.81	—	7,879	7,879	0.41	0.44	0.76	8,021
Area	5.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	3,162	3,162	0.22	0.02	—	3,173
Water	—	—	—	—	—	—	—	—	—	—	15.9	61.3	77.2	1.63	0.04	—	130
Waste	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Total	9.48	5.26	29.2	0.08	0.12	6.90	7.01	0.11	1.75	1.86	97.2	11,103	11,200	10.4	0.49	2.37	11,610
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.53	4.40	32.0	0.08	0.06	6.85	6.91	0.06	1.74	1.80	—	8,264	8,264	0.39	0.43	12.7	8,414
Area	6.00	0.07	7.34	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	22.0	22.0	< 0.005	< 0.005	—	22.1
Energy	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	3,162	3,162	0.22	0.02	—	3,173
Water	—	—	—	—	—	—	—	—	—	—	15.9	61.3	77.2	1.63	0.04	—	130
Waste	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Total	10.6	5.13	39.6	0.09	0.12	6.85	6.97	0.12	1.74	1.85	97.2	11,510	11,607	10.4	0.49	14.3	12,025
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.83	0.80	5.84	0.01	0.01	1.25	1.26	0.01	0.32	0.33	—	1,368	1,368	0.06	0.07	2.10	1,393
Area	1.10	0.01	1.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.65	3.65	< 0.005	< 0.005	—	3.66
Energy	0.01	0.12	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	524	524	0.04	< 0.005	—	525
Water	—	—	—	—	—	—	—	—	—	—	2.63	10.1	12.8	0.27	0.01	—	21.5
Waste	—	—	—	—	—	—	—	—	—	—	13.5	0.00	13.5	1.35	0.00	—	47.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.27	0.27
Total	1.93	0.94	7.23	0.02	0.02	1.25	1.27	0.02	0.32	0.34	16.1	1,906	1,922	1.72	0.08	2.37	1,991



## 2.6. Operations Emissions by Sector, Mitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.37	4.25	40.6	0.09	0.06	6.90	6.96	0.06	1.75	1.81	—	8,858	8,858	0.38	0.43	29.4	9,024
Area	6.81	0.14	14.9	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.7	44.7	< 0.005	< 0.005	—	44.8
Energy	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	3,162	3,162	0.22	0.02	—	3,173
Water	—	—	—	—	—	—	—	—	—	—	15.9	61.3	77.2	1.63	0.04	—	130
Waste	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Total	12.2	5.05	55.8	0.09	0.13	6.90	7.02	0.12	1.75	1.87	97.2	12,127	12,224	10.4	0.48	31.0	12,658
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.22	4.59	28.9	0.08	0.06	6.90	6.96	0.06	1.75	1.81	—	7,879	7,879	0.41	0.44	0.76	8,021
Area	5.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	3,162	3,162	0.22	0.02	—	3,173
Water	—	—	—	—	—	—	—	—	—	—	15.9	61.3	77.2	1.63	0.04	—	130
Waste	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Total	9.48	5.26	29.2	0.08	0.12	6.90	7.01	0.11	1.75	1.86	97.2	11,103	11,200	10.4	0.49	2.37	11,610
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.53	4.40	32.0	0.08	0.06	6.85	6.91	0.06	1.74	1.80	—	8,264	8,264	0.39	0.43	12.7	8,414
Area	6.00	0.07	7.34	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	22.0	22.0	< 0.005	< 0.005	—	22.1
Energy	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	3,162	3,162	0.22	0.02	—	3,173
Water	—	—	—	—	—	—	—	—	—	—	15.9	61.3	77.2	1.63	0.04	—	130

Waste	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Total	10.6	5.13	39.6	0.09	0.12	6.85	6.97	0.12	1.74	1.85	97.2	11,510	11,607	10.4	0.49	14.3	12,025
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.83	0.80	5.84	0.01	0.01	1.25	1.26	0.01	0.32	0.33	—	1,368	1,368	0.06	0.07	2.10	1,393
Area	1.10	0.01	1.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.65	3.65	< 0.005	< 0.005	—	3.66
Energy	0.01	0.12	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	524	524	0.04	< 0.005	—	525
Water	—	—	—	—	—	—	—	—	—	—	2.63	10.1	12.8	0.27	0.01	—	21.5
Waste	—	—	—	—	—	—	—	—	—	—	13.5	0.00	13.5	1.35	0.00	—	47.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.27	0.27
Total	1.93	0.94	7.23	0.02	0.02	1.25	1.27	0.02	0.32	0.34	16.1	1,906	1,922	1.72	0.08	2.37	1,991

### 3. Construction Emissions Details

#### 3.1. Site Preparation (2024) - Unmitigated

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

Location	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	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—

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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.99	0.90	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.11	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	226	226	0.01	0.01	0.03	229
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.62	6.62	< 0.005	< 0.005	0.01	6.71

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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	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
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

### 3.2. Site Preparation (2024) - Mitigated

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

Location	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	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.99	0.90	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146

Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.11	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	226	226	0.01	0.01	0.03	229
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.62	6.62	< 0.005	< 0.005	0.01	6.71
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	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

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
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### 3.3. Grading (2024) - Unmitigated

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

Location	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	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.82	2.48	0.01	0.12	—	0.12	0.11	—	0.11	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	0.76	0.76	—	0.30	0.30	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.51	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1

Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.12	1.18	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	261
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.7	22.7	< 0.005	< 0.005	0.04	23.0
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.76	3.76	< 0.005	< 0.005	0.01	3.81
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
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

### 3.4. Grading (2024) - Mitigated

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

Location	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	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.82	2.48	0.01	0.12	—	0.12	0.11	—	0.11	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	0.20	0.20	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.51	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.12	1.18	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	261
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.7	22.7	< 0.005	< 0.005	0.04	23.0
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.76	3.76	< 0.005	< 0.005	0.01	3.81
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
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

### 3.5. Building Construction (2024) - Unmitigated

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

Location	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	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	6.13	7.16	0.01	0.27	—	0.27	0.25	—	0.25	—	1,309	1,309	0.05	0.01	—	1,314
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.12	1.31	< 0.005	0.05	—	0.05	0.05	—	0.05	—	217	217	0.01	< 0.005	—	217
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.99	1.02	18.5	0.00	0.00	2.34	2.34	0.00	0.55	0.55	—	2,719	2,719	0.10	0.09	10.1	2,758
Vendor	0.04	1.21	0.54	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,107	1,107	0.01	0.15	3.01	1,156
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.74	1.09	10.6	0.00	0.00	2.34	2.34	0.00	0.55	0.55	—	2,312	2,312	0.11	0.09	0.26	2,342
Vendor	0.04	1.30	0.55	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,108	1,108	0.01	0.15	0.08	1,154
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.47	0.55	7.17	0.00	0.00	1.27	1.27	0.00	0.30	0.30	—	1,350	1,350	0.06	0.05	2.39	1,368
Vendor	0.02	0.69	0.30	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	605	605	0.01	0.08	0.71	631
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.10	1.31	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	223	223	0.01	0.01	0.40	227
Vendor	< 0.005	0.13	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	100	100	< 0.005	0.01	0.12	104
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

### 3.6. Building Construction (2024) - Mitigated

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

Location	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	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	6.13	7.16	0.01	0.27	—	0.27	0.25	—	0.25	—	1,309	1,309	0.05	0.01	—	1,314

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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.12	1.31	< 0.005	0.05	—	0.05	0.05	—	0.05	—	217	217	0.01	< 0.005	—	217
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.99	1.02	18.5	0.00	0.00	2.34	2.34	0.00	0.55	0.55	—	2,719	2,719	0.10	0.09	10.1	2,758
Vendor	0.04	1.21	0.54	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,107	1,107	0.01	0.15	3.01	1,156
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.74	1.09	10.6	0.00	0.00	2.34	2.34	0.00	0.55	0.55	—	2,312	2,312	0.11	0.09	0.26	2,342
Vendor	0.04	1.30	0.55	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,108	1,108	0.01	0.15	0.08	1,154
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.47	0.55	7.17	0.00	0.00	1.27	1.27	0.00	0.30	0.30	—	1,350	1,350	0.06	0.05	2.39	1,368
Vendor	0.02	0.69	0.30	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	605	605	0.01	0.08	0.71	631
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.10	1.31	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	223	223	0.01	0.01	0.40	227
Vendor	< 0.005	0.13	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	100	100	< 0.005	0.01	0.12	104
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

### 3.7. Building Construction (2025) - Unmitigated

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

Location	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	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	2.90	3.62	0.01	0.12	—	0.12	0.11	—	0.11	—	666	666	0.03	0.01	—	669
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.53	0.66	< 0.005	0.02	—	0.02	0.02	—	0.02	—	110	110	< 0.005	< 0.005	—	111
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.94	0.94	17.1	0.00	0.00	2.34	2.34	0.00	0.55	0.55	—	2,660	2,660	0.10	0.09	9.20	2,698
Vendor	0.04	1.15	0.51	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,089	1,089	0.01	0.15	3.00	1,135
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	1.01	9.70	0.00	0.00	2.34	2.34	0.00	0.55	0.55	—	2,263	2,263	0.11	0.09	0.24	2,293
Vendor	0.04	1.23	0.52	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,090	1,090	0.01	0.15	0.08	1,134
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.26	3.38	0.00	0.00	0.65	0.65	0.00	0.15	0.15	—	672	672	0.03	0.02	1.10	681
Vendor	0.01	0.34	0.14	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	303	303	< 0.005	0.04	0.36	315
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.62	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	111	111	< 0.005	< 0.005	0.18	113
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	50.1	50.1	< 0.005	0.01	0.06	52.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.8. Building Construction (2025) - Mitigated

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

Location	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	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	2.90	3.62	0.01	0.12	—	0.12	0.11	—	0.11	—	666	666	0.03	0.01	—	669
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.53	0.66	< 0.005	0.02	—	0.02	0.02	—	0.02	—	110	110	< 0.005	< 0.005	—	111
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.94	0.94	17.1	0.00	0.00	2.34	2.34	0.00	0.55	0.55	—	2,660	2,660	0.10	0.09	9.20	2,698
Vendor	0.04	1.15	0.51	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,089	1,089	0.01	0.15	3.00	1,135
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	1.01	9.70	0.00	0.00	2.34	2.34	0.00	0.55	0.55	—	2,263	2,263	0.11	0.09	0.24	2,293

Vendor	0.04	1.23	0.52	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,090	1,090	0.01	0.15	0.08	1,134
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.26	3.38	0.00	0.00	0.65	0.65	0.00	0.15	0.15	—	672	672	0.03	0.02	1.10	681
Vendor	0.01	0.34	0.14	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	303	303	< 0.005	0.04	0.36	315
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.62	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	111	111	< 0.005	< 0.005	0.18	113
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	50.1	50.1	< 0.005	0.01	0.06	52.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.9. Paving (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



Off-Road Equipment	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.43	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	223	223	0.01	0.01	0.77	226
Vendor	0.01	0.33	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	316	316	< 0.005	0.04	0.87	330
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.02	11.2
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.3	17.3	< 0.005	< 0.005	0.02	18.1
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.84	1.84	< 0.005	< 0.005	< 0.005	1.86
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.87	2.87	< 0.005	< 0.005	< 0.005	2.99
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

## 3.10. Paving (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.08	1.43	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	223	223	0.01	0.01	0.77	226
Vendor	0.01	0.33	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	316	316	< 0.005	0.04	0.87	330
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.02	11.2
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.3	17.3	< 0.005	< 0.005	0.02	18.1
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.84	1.84	< 0.005	< 0.005	< 0.005	1.86
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.87	2.87	< 0.005	< 0.005	< 0.005	2.99
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

### 3.11. Architectural Coating (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectu ral Coatings	74.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	4.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.19	3.42	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	532	532	0.02	0.02	1.84	540
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.5	26.5	< 0.005	< 0.005	0.04	26.9

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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.39	4.39	< 0.005	< 0.005	0.01	4.45
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
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

### 3.12. Architectural Coating (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectu ral Coatings	69.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectu ral Coatings	3.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	0.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.19	3.42	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	532	532	0.02	0.02	1.84	540
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.5	26.5	< 0.005	< 0.005	0.04	26.9
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.39	4.39	< 0.005	< 0.005	0.01	4.45
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
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

## 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	5.37	4.25	40.6	0.09	0.06	6.90	6.96	0.06	1.75	1.81	—	8,858	8,858	0.38	0.43	29.4	9,024
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	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	5.37	4.25	40.6	0.09	0.06	6.90	6.96	0.06	1.75	1.81	—	8,858	8,858	0.38	0.43	29.4	9,024
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	4.22	4.59	28.9	0.08	0.06	6.90	6.96	0.06	1.75	1.81	—	7,879	7,879	0.41	0.44	0.76	8,021
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	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	4.22	4.59	28.9	0.08	0.06	6.90	6.96	0.06	1.75	1.81	—	7,879	7,879	0.41	0.44	0.76	8,021
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartmen Mid Rise	0.83	0.80	5.84	0.01	0.01	1.25	1.26	0.01	0.32	0.33	—	1,368	1,368	0.06	0.07	2.10	1,393
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	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	0.83	0.80	5.84	0.01	0.01	1.25	1.26	0.01	0.32	0.33	—	1,368	1,368	0.06	0.07	2.10	1,393

#### 4.1.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	5.37	4.25	40.6	0.09	0.06	6.90	6.96	0.06	1.75	1.81	—	8,858	8,858	0.38	0.43	29.4	9,024
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	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	5.37	4.25	40.6	0.09	0.06	6.90	6.96	0.06	1.75	1.81	—	8,858	8,858	0.38	0.43	29.4	9,024
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	4.22	4.59	28.9	0.08	0.06	6.90	6.96	0.06	1.75	1.81	—	7,879	7,879	0.41	0.44	0.76	8,021
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00



Enclosed Parking Structure	0.00	0.00	0.00	0.00	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	4.22	4.59	28.9	0.08	0.06	6.90	6.96	0.06	1.75	1.81	—	7,879	7,879	0.41	0.44	0.76	8,021
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.83	0.80	5.84	0.01	0.01	1.25	1.26	0.01	0.32	0.33	—	1,368	1,368	0.06	0.07	2.10	1,393
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	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	0.83	0.80	5.84	0.01	0.01	1.25	1.26	0.01	0.32	0.33	—	1,368	1,368	0.06	0.07	2.10	1,393

## 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,683	1,683	0.10	0.01	—	1,689
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	245	245	0.02	< 0.005	—	246
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	392	392	0.02	< 0.005	—	393
Total	—	—	—	—	—	—	—	—	—	—	—	2,319	2,319	0.14	0.02	—	2,328

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,683	1,683	0.10	0.01	—	1,689
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	245	245	0.02	< 0.005	—	246
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	392	392	0.02	< 0.005	—	393
Total	—	—	—	—	—	—	—	—	—	—	—	2,319	2,319	0.14	0.02	—	2,328
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	279	279	0.02	< 0.005	—	280
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	40.5	40.5	< 0.005	< 0.005	—	40.7
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	64.9	64.9	< 0.005	< 0.005	—	65.1
Total	—	—	—	—	—	—	—	—	—	—	—	384	384	0.02	< 0.005	—	385

#### 4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,683	1,683	0.10	0.01	—	1,689
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	245	245	0.02	< 0.005	—	246

Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	392	392	0.02	< 0.005	—	393
Total	—	—	—	—	—	—	—	—	—	—	—	2,319	2,319	0.14	0.02	—	2,328
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,683	1,683	0.10	0.01	—	1,689
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	245	245	0.02	< 0.005	—	246
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	392	392	0.02	< 0.005	—	393
Total	—	—	—	—	—	—	—	—	—	—	—	2,319	2,319	0.14	0.02	—	2,328
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	279	279	0.02	< 0.005	—	280
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	40.5	40.5	< 0.005	< 0.005	—	40.7
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	64.9	64.9	< 0.005	< 0.005	—	65.1
Total	—	—	—	—	—	—	—	—	—	—	—	384	384	0.02	< 0.005	—	385

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

Apartmen Mid Rise	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	843	843	0.07	< 0.005	—	845
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
Enclosed Parking Structure	0.00	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	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	843	843	0.07	< 0.005	—	845
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	843	843	0.07	< 0.005	—	845
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
Enclosed Parking Structure	0.00	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	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	843	843	0.07	< 0.005	—	845
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	0.01	0.12	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	140	140	0.01	< 0.005	—	140
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
Enclosed Parking Structure	0.00	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	0.12	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	140	140	0.01	< 0.005	—	140

## 4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	843	843	0.07	< 0.005	—	845
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
Enclosed Parking Structure	0.00	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	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	843	843	0.07	< 0.005	—	845
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	843	843	0.07	< 0.005	—	845
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
Enclosed Parking Structure	0.00	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	0.04	0.66	0.28	< 0.005	0.05	—	0.05	0.05	—	0.05	—	843	843	0.07	< 0.005	—	845
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	0.12	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	140	140	0.01	< 0.005	—	140
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
Enclosed Parking Structure	0.00	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	0.12	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	140	140	0.01	< 0.005	—	140
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### 4.3. Area Emissions by Source

#### 4.3.1. Unmitigated

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

Source	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	4.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.59	0.14	14.9	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.7	44.7	< 0.005	< 0.005	—	44.8
Total	6.81	0.14	14.9	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.7	44.7	< 0.005	< 0.005	—	44.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	4.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	5.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	0.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.14	0.01	1.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.65	3.65	< 0.005	< 0.005	—	3.66
Total	1.10	0.01	1.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.65	3.65	< 0.005	< 0.005	—	3.66

#### 4.3.2. Mitigated

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

Source	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	4.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.59	0.14	14.9	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.7	44.7	< 0.005	< 0.005	—	44.8
Total	6.81	0.14	14.9	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.7	44.7	< 0.005	< 0.005	—	44.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	4.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectu Coatings	0.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	5.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consum r Products	0.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscap e Equipme nt	0.14	0.01	1.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.65	3.65	< 0.005	< 0.005	—	3.66
Total	1.10	0.01	1.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.65	3.65	< 0.005	< 0.005	—	3.66

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	15.9	57.3	73.2	1.63	0.04	—	126
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.96	3.96	< 0.005	< 0.005	—	3.98
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	15.9	61.3	77.2	1.63	0.04	—	130



Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	15.9	57.3	73.2	1.63	0.04	—	126
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.96	3.96	< 0.005	< 0.005	—	3.98
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	15.9	61.3	77.2	1.63	0.04	—	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	2.63	9.49	12.1	0.27	0.01	—	20.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.66	0.66	< 0.005	< 0.005	—	0.66
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	2.63	10.1	12.8	0.27	0.01	—	21.5

#### 4.4.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	15.9	57.3	73.2	1.63	0.04	—	126
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.96	3.96	< 0.005	< 0.005	—	3.98

Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	15.9	61.3	77.2	1.63	0.04	—	130
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	15.9	57.3	73.2	1.63	0.04	—	126
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.96	3.96	< 0.005	< 0.005	—	3.98
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	15.9	61.3	77.2	1.63	0.04	—	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	2.63	9.49	12.1	0.27	0.01	—	20.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.66	0.66	< 0.005	< 0.005	—	0.66
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	2.63	10.1	12.8	0.27	0.01	—	21.5

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	13.5	0.00	13.5	1.35	0.00	—	47.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	13.5	0.00	13.5	1.35	0.00	—	47.1

## 4.5.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	81.3	0.00	81.3	8.13	0.00	—	284
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	13.5	0.00	13.5	1.35	0.00	—	47.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	13.5	0.00	13.5	1.35	0.00	—	47.1

## 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.27	0.27
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.27	0.27

### 4.6.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.60	1.60
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.27	0.27
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.27	0.27

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

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

#### 4.7.2. Mitigated

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

Equipment Type	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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.8.2. Mitigated

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

Equipment Type	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)



Equipme Type	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.9.2. Mitigated

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

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

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

Vegetation	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

Land Use	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

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

## 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/30/2024	2/13/2024	5.00	10.0	—
Grading	Grading	2/14/2024	3/27/2024	5.00	30.0	—
Building Construction	Building Construction	3/28/2024	5/22/2025	5.00	300	—
Paving	Paving	5/23/2025	6/20/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	6/21/2025	7/19/2025	5.00	20.0	—

### 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
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	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	6.00	37.0	0.48

### 5.2.2. Mitigated

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
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	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	6.00	37.0	0.48

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	179	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	34.4	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT



Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	10.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	35.8	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

### 5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	179	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	34.4	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT

Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	10.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	35.8	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	453,317	151,106	3,387	376	16,016

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	90.0	0.00	—

Paving	0.00	0.00	0.00	0.00	6.13
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## 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Parking Lot	4.40	100%
Enclosed Parking Structure	1.73	100%

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

## 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
Apartments Mid Rise	1,375	1,375	1,375	501,860	9,755	9,755	9,755	3,560,623
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	1,375	1,375	1,375	501,860	9,755	9,755	9,755	3,560,623
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

#### 5.10.1.2. Mitigated

### 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)
453316.5	151,106	3,387	376	16,016

### 5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

### 5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

## 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)
Apartments Mid Rise	1,154,468	532	0.0330	0.0040	2,630,134
Parking Lot	167,898	532	0.0330	0.0040	0.00
Enclosed Parking Structure	268,910	532	0.0330	0.0040	0.00

### 5.11.2. Mitigated

#### 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)
Apartments Mid Rise	1,154,468	532	0.0330	0.0040	2,630,134
Parking Lot	167,898	532	0.0330	0.0040	0.00
Enclosed Parking Structure	268,910	532	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)
Apartments Mid Rise	8,297,450	0.00
Parking Lot	0.00	844,453
Enclosed Parking Structure	0.00	0.00

### 5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
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Apartments Mid Rise	8,297,450	0.00
Parking Lot	0.00	844,453
Enclosed Parking Structure	0.00	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	151	—
Parking Lot	0.00	—
Enclosed Parking Structure	0.00	—

### 5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	151	—
Parking Lot	0.00	—
Enclosed Parking Structure	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
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

## 5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

## 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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## 5.15.2. Mitigated

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
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## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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#### 5.18.1.2. Mitigated

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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#### 5.18.1.2. Mitigated

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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#### 5.18.2.2. Mitigated

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	20.5	annual days of extreme heat
Extreme Precipitation	0.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.90	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  $\frac{3}{4}$  an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

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

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

### 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	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	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	N/A	N/A	N/A	N/A
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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	1	1	1	2
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	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

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

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

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

### 6.4. Climate Risk Reduction Measures

## 7. Health and Equity Details

### 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—

AQ-Ozone	88.7
AQ-PM	6.42
AQ-DPM	23.3
Drinking Water	45.4
Lead Risk Housing	3.36
Pesticides	0.00
Toxic Releases	2.28
Traffic	54.3
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	2.11
Haz Waste Facilities/Generators	7.35
Impaired Water Bodies	0.00
Solid Waste	52.9
Sensitive Population	—
Asthma	43.8
Cardio-vascular	62.4
Low Birth Weights	3.57
Socioeconomic Factor Indicators	—
Education	51.0
Housing	37.5
Linguistic	61.5
Poverty	50.0
Unemployment	37.7

## 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	59.36096497
Employed	95.85525472
Median HI	46.91389709
Education	—
Bachelor's or higher	61.85037854
High school enrollment	100
Preschool enrollment	32.38804055
Transportation	—
Auto Access	53.75336841
Active commuting	19.15821891
Social	—
2-parent households	45.32272552
Voting	33.11946619
Neighborhood	—
Alcohol availability	73.47619659
Park access	29.10304119
Retail density	42.35852688
Supermarket access	61.22160914
Tree canopy	1.360195047
Housing	—
Homeownership	67.59912742
Housing habitability	42.70499166
Low-inc homeowner severe housing cost burden	8.879763891
Low-inc renter severe housing cost burden	54.20248941
Uncrowded housing	81.14974978

Health Outcomes	—
Insured adults	36.50712178
Arthritis	0.0
Asthma ER Admissions	53.3
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	32.9
Cognitively Disabled	74.6
Physically Disabled	38.4
Heart Attack ER Admissions	34.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
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	89.4
Elderly	50.2
English Speaking	74.2
Foreign-born	36.8
Outdoor Workers	62.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	54.4
Traffic Density	19.9
Traffic Access	23.0
Other Indices	—
Hardship	25.0
Other Decision Support	—
2016 Voting	55.9

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	18.0
Healthy Places Index Score for Project Location (b)	56.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

### 7.4. Health & Equity Measures

No Health & Equity Measures selected.

### 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

## 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

## 8. User Changes to Default Data

Screen	Justification
Land Use	Per site plan
Construction: Construction Phases	No demolition required
Operations: Vehicle Data	Per traffic scoping agreement
Operations: Hearths	No hearths

## **Appendix B:**

EMFAC2017 Output



Source: EMFAC2017 (v1.0.3) Emissions Inventory

Region Type: Air District

Region: South Coast AQMD

Calendar Year: 2023

Season: Annual

Vehicle Classification: EMFAC2007 Categories

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

Region	Calendar Yr	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel Consumption	Fuel Consumption	Total Fuel Consumption	VMT	Total VMT	Miles Per Gallon	Vehicle Class
South Coast	2023	HHDT	Aggregate	Aggregate	Gasoline	75.10442936	8265.097	1502.689	1.936286145	1936.286145		1913466.474	8265.097	13656273.03	7.14 <b>HHDT</b>
South Coast	2023	HHDT	Aggregate	Aggregate	Diesel	109818.6753	13648008	1133618	1911.530188	1911530.188			13648008		
South Coast	2023	LDA	Aggregate	Aggregate	Gasoline	6635002.295	2.53E+08	31352477	7971.24403	7971244.03		8020635.698	2.53E+08	255180358.3	31.82 <b>LDA</b>
South Coast	2023	LDA	Aggregate	Aggregate	Diesel	62492.97958	2469816	297086.6	49.3916685	49391.6685			2469816		
South Coast	2023	LDA	Aggregate	Aggregate	Electricity	150700.3971	6237106	751566	0	0			6237106		
South Coast	2023	LDT1	Aggregate	Aggregate	Gasoline	758467.6481	27812996	3504563	1023.913006	1023913.006		1024279.466	27812996	27821405.09	27.16 <b>LDT1</b>
South Coast	2023	LDT1	Aggregate	Aggregate	Diesel	360.7799144	8408.618	1256.88	0.366459477	366.4594769			8408.618		
South Coast	2023	LDT1	Aggregate	Aggregate	Electricity	7122.93373	303507.5	35798.19	0	0			303507.5		
South Coast	2023	LDT2	Aggregate	Aggregate	Gasoline	2285150.139	85272416	10723315	3338.798312	3338798.312		3356536.438	85272416	85922778.34	25.60 <b>LDT2</b>
South Coast	2023	LDT2	Aggregate	Aggregate	Diesel	15594.68309	650362.8	76635.83	17.73812611	17738.12611			650362.8		
South Coast	2023	LDT2	Aggregate	Aggregate	Electricity	28809.63735	917592.8	145405.4	0	0			917592.8		
South Coast	2023	LHDT1	Aggregate	Aggregate	Gasoline	174910.3847	6216643	2605904	583.3851736	583385.1736		811563.1022	6216643	11211395.79	13.81 <b>LHDT1</b>
South Coast	2023	LHDT1	Aggregate	Aggregate	Diesel	125545.0822	4994753	1579199	228.1779285	228177.9285			4994753		
South Coast	2023	LHDT2	Aggregate	Aggregate	Gasoline	30102.75324	1034569	448486.2	111.5753864	111575.3864		209423.5025	1034569	2969599.008	14.18 <b>LHDT2</b>
South Coast	2023	LHDT2	Aggregate	Aggregate	Diesel	50003.13116	1935030	628976.5	97.84811618	97848.11618			1935030		
South Coast	2023	MCY	Aggregate	Aggregate	Gasoline	305044.5141	2104624	610089	57.849018	57849.018		57849.018	2104624	2104623.657	36.38 <b>MCY</b>
South Coast	2023	MDV	Aggregate	Aggregate	Gasoline	1589862.703	55684188	7354860	2693.883526	2693883.526		2744536.341	55684188	57109879.73	20.81 <b>MDV</b>
South Coast	2023	MDV	Aggregate	Aggregate	Diesel	36128.1019	1425691	176566.9	50.65281491	50652.81491			1425691		
South Coast	2023	MDV	Aggregate	Aggregate	Electricity	16376.67653	537591.7	83475.95	0	0			537591.7		
South Coast	2023	MH	Aggregate	Aggregate	Gasoline	34679.50542	330042.9	3469.338	63.26295123	63262.95123		74893.26955	330042.9	454344.9436	6.07 <b>MH</b>
South Coast	2023	MH	Aggregate	Aggregate	Diesel	13122.69387	124302	1312.269	11.63031832	11630.31832			124302		
South Coast	2023	MHDT	Aggregate	Aggregate	Gasoline	25624.3151	1363694	512691.3	265.2060557	265206.0557		989975.6425	1363694	9484317.768	9.58 <b>MHDT</b>
South Coast	2023	MHDT	Aggregate	Aggregate	Diesel	122124.488	8120623	1221858	724.7695868	724769.5868			8120623		
South Coast	2023	OBUS	Aggregate	Aggregate	Gasoline	5955.291639	245774	119153.5	48.07750689	48077.50689		86265.88761	245774	579743.8353	6.72 <b>OBUS</b>
South Coast	2023	OBUS	Aggregate	Aggregate	Diesel	4286.940093	333969.8	41558.29	38.18838072	38188.38072			333969.8		
South Coast	2023	SBUS	Aggregate	Aggregate	Gasoline	2783.643068	112189.6	11134.57	12.19474692	12194.74692		39638.85935	112189.6	323043.5203	8.15 <b>SBUS</b>
South Coast	2023	SBUS	Aggregate	Aggregate	Diesel	6671.825716	210853.9	76991.94	27.44411242	27444.11242			210853.9		
South Coast	2023	UBUS	Aggregate	Aggregate	Gasoline	957.7686184	89782.63	3831.074	17.62416327	17624.16327		17863.66378	89782.63	91199.2533	5.11 <b>UBUS</b>
South Coast	2023	UBUS	Aggregate	Aggregate	Diesel	13.00046095	1416.622	52.00184	0.239500509	239.5005093			1416.622		
South Coast	2023	UBUS	Aggregate	Aggregate	Electricity	16.11693886	1320.163	64.46776	0				1320.163		