



An Employee-Owned Company

June 17, 2026

Mr. Joe DeHoyos
Project Manager
Z Global
750 W. Main Street
El Centro, CA 92243

Reference: Air Quality Analysis for the Rio Vista Apartments Project (RECON Number 10631)

Dear Mr. DeHoyos:

The purpose of this report is to assess potential short-term and long-term local and regional air quality impacts resulting from development of the Rio Vista Apartments Project (project). The analysis of impacts is based on state and federal Ambient Air Quality Standards (AAQS) and assessed in accordance with the regional guidelines, policies, and standards and the Imperial County Air Pollution Control District (ICAPCD).

1.0 Project Description

The project is located in the northwestern portion of the City of Brawley (City) sphere of influence in Imperial County, California. The 7.87-acre project area consists of five parcels (Assessor's Parcel Numbers 046-050-016, 046-050-030, 046-050-028, 046-050-039, and 046-050-038) bounded by West River Road¹ to the south, North Rio Vista Avenue and a single-family residential property to the east, Pat Williams Park to the west, and vacant open space to the north. The project area is currently developed with two single-family residences, ancillary structures, small-animal husbandry pens, and equestrian training related facilities; all would be demolished as part of the project. Figure 1 shows the regional location. Figure 2 shows an aerial photograph of the project site and vicinity.

The project would construct a 133-unit apartment complex consisting of five separate buildings. The project would also construct a 4,400-square-foot clubhouse with a swimming pool, three green spaces, and a sewer lift station. The project would also provide a total of 278 surface parking spaces. Access to the project site would be provided via a driveway connection to West River Road. The project would dedicate 0.36 acres of right-of-way (ROW) to West River Road and dedicate 0.17 acres of right-of-way to North Rio Vista Avenue. Off-site improvements would consist of extending an existing road through Pat Williams Park that would provide fire access from West River Road to the northwest corner of the project site. This roadway extension would total 0.24 acres. Figure 3 shows the proposed site plan.

A portion of the project site is currently designated as an Urban Area in the Imperial County's (County) General Plan and is zoned A-2-U (General Agricultural). The portion of the project site that is located within the City is designated as Rural Residential in the City's General Plan and is zoned R-E (Residential Estate). The project site would be annexed into the City and would require a General Plan Amendment to designate the entire site as Residential Medium Density and a Zoning Amendment to zone the site as R-3 (Residential Medium Density).

¹ Note that West River Road becomes West River Drive east of the intersection with North Rio Vista Avenue.

2.0 Environmental Setting

2.1 Regulatory Setting

2.1.1 Federal Regulations

AAQS represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 (42 U.S. Code [U.S.C.] 7401) for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, in order to achieve the purposes of Section 109 of the CAA [42 U.S.C. 7409], the U.S. Environmental Protection Agency (U.S. EPA) developed primary and secondary National AAQS (NAAQS).

Pollutants of primary concern were designated: ozone, carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), lead (Pb), particulate matter with a diameter of 10 microns and less (PM₁₀), and particulate matter with a diameter of 2.5 microns and less (PM_{2.5}). The primary NAAQS "in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health" and the secondary standards ". . . protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 U.S.C. 7409(b)(2)]. The primary NAAQS were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The NAAQS are presented in Table 1 (California Air Resources Board [CARB] 2024).

If an air basin is not in either federal or state attainment for a particular pollutant, the basin is classified as non-attainment area for that pollutant. The project is located within the Salton Sea Air Basin (SSAB). The County is classified as a federal moderate non-attainment area for the 2008 8-hour ozone standards, marginal non-attainment area for the 2015 8-hour ozone standards, and a partial moderate non-attainment area for the PM_{2.5} standards.

There have been recent congressional actions that affect California emission standards, they include the following:

Public Law 119-15

- On June 12, 2025, Public Law 119-15, enacting House Joint Resolution 87, was signed into law. The law used the Congressional Review Act to nullify the U.S. EPA's rule that had granted California a waiver to enforce stricter emissions standards for heavy-duty vehicles under the CAA. The disapproved rule included programs such as the Advanced Clean Trucks regulation and zero-emission requirements for airport shuttles. Passed under the Congressional Review Act, the law prevents the U.S. EPA from implementing or reissuing the same or similar rules without new congressional authorization. This effectively blocks California, and other states that follow its standards, from enforcing these specific vehicle emission and warranty regulations.

Public Law 119-16

- Similarly, on June 12, 2025, Public Law 119-16, enacting House Joint Resolution 88, became law. The law also relied on the Congressional Review Act to void the U.S. EPA's December 2024 waiver under the CAA that allowed California to implement and enforce the Advanced Clean Cars (ACC) II regulation. ACC II included a zero-emission vehicle mandate targeting 100 percent new light-duty zero-emission vehicle sales by 2035. Public Law 119-16 marks the first ever occurrence that waivers under the CAA have been revoked

under the Congressional Review Act. The implications of this law on the state's capability to enforce its independent fuel economy standards are uncertain at this time, as the California Attorney General is pursuing legal action challenging Public Law 119-16. Whether this action will be successful is unknown, as is the possibility that a federal judge will issue a stay to halt the implementation of the ACC II regulation during the legal process.

Public Law 119-17

- Public Law 119–17, enacted on June 12, 2025, disapproves, under the Congressional Review Act, the U.S. EPA's rule titled "California State Motor Vehicle and Engine and Nonroad Engine Pollution Control Standards; The 'Omnibus' Low NO_x Regulation; Waiver of Preemption; Notice of Decision." The law nullifies the U.S. EPA's January 6, 2025, Low-NO_x rule that would have granted California a waiver to enforce stricter emissions standards for both on-road and non-road heavy-duty engines. Similar to the other Congressional Review Act resolutions listed above targeting emissions waivers, this law prohibits the U.S. EPA from reissuing the same or substantially similar rule without new authorization from Congress. The law effectively blocks California, and any states following its standards, from implementing this omnibus Low-NO_x regulatory package.

2.1.2 State Regulations

Criteria Pollutants

The CARB has developed the California AAQS (CAAQS) and generally has set more stringent limits on the criteria pollutants than the NAAQS (see Table 1). In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Similar to the federal CAA, the state classifies either "attainment" or "non-attainment" areas for each pollutant based on the comparison of measured data with the CAAQS. The County is a non-attainment area for the state ozone standards and the state PM₁₀ standard. The California CAA, which became effective on January 1, 1989, requires all areas of the state to attain the CAAQS at the earliest practicable date. The California CAA has specific air quality management strategies that must be adopted by the agency responsible for the non-attainment area. In the case of the SSAB, the responsible agency is the ICAPCD.

Toxic Air Contaminants

The public's exposure to toxic air contaminants (TACs) is a significant public health issue in California. Diesel particulate matter (DPM) emissions have been identified as TACs. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The California Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air.

Table 1 Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		–		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	--	--	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	9 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-dispersive Infrared Photometry	35 ppm (40 mg/m ³)	–	Non-dispersive Infrared Photometry
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		–	–	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m ³)	–	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		53 ppb (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3 Hour	–		–	0.5 ppm (1,300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ¹¹	–	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chroma-tography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chroma-tography			

Table 1
Ambient Air Quality Standards

NOTES:

ppm = parts per million; ppb = parts per billion; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; – = not applicable.

¹ California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, particulate matter (PM_{10} , $\text{PM}_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled 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.

² 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_{10} , the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For $\text{PM}_{2.5}$, 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.

³ 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.

⁴ Any equivalent measurement method which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

⁵ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

⁶ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

⁷ 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 October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

⁹ On February 7, 2024, the national annual $\text{PM}_{2.5}$ primary standard was lowered from $12.0 \mu\text{g}/\text{m}^3$ to $9.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour $\text{PM}_{2.5}$ standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standards of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM_{10} standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

¹⁰ 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 standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards 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.

¹¹ On June 2, 2010, a new 1-hour SO_2 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_2 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.

¹² The CARB 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.

¹³ The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ 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.

¹⁴ In 1989, the CARB 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.

SOURCE: CARB 2024.

The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

The Children's Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air monitoring network, and develop any additional air toxic control measures needed to protect children's health. Locally, toxic air pollutants are regulated through the ICAPCD Regulation X. Of particular concern statewide are DPM emissions. DPM was established as a TAC in 1998 and is estimated to represent a majority of the cancer risk from TACs statewide (based on the statewide average). Diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants program.

Following the identification of DPM as a TAC in 1998, CARB has worked on developing strategies and regulations aimed at reducing the risk from DPM. The overall strategy for achieving these reductions is found in the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB 2000). A stated goal of the plan is to reduce the statewide cancer risk arising from exposure to DPM by 85 percent by 2020.

In April 2005, CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2005). The handbook makes recommendations directed at protecting sensitive land uses from air pollutant emissions while balancing a myriad of other land use issues (e.g., housing, transportation needs, economics, etc.). Sensitive land uses include but are not limited to, schools, hospitals, residences, resident care facilities, and day-care centers. The handbook is not regulatory or binding on local agencies and recognizes that application takes a qualitative approach. Therefore, the CARB has provided guidelines for the siting of land uses near heavily traveled roadways. Of pertinence to this study, the CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles/day should be avoided when possible.

As an ongoing process, CARB will continue to establish new programs and regulations for the control of DPM and other air-toxics emissions as appropriate. The continued development and implementation of these programs and policies will ensure that the public's exposure to DPM and other TACs will continue to decline.

State Implementation Plan

The State Implementation Plan (SIP) is a collection of documents that set forth the state's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as air quality management plans, monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. The CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

The ICAPCD is the air district responsible for the project area. Applicable ICAPCD SIPs include:

- Imperial County 2009 State Implementation Plan for Particulate Matter Less than 10 Microns in Aerodynamic Diameter;
- Imperial County 2013 State Implementation Plan for the 2006 24-Hour PM_{2.5} Moderate Non-attainment Area;
- Imperial County 2017 State Implementation Plan for the 2008 8-Hour Ozone Standard;
- Imperial County 2018 State Implementation Plan for the 2012 Annual Standard for PM_{2.5}; and
- Imperial County 2018 Redesignation Request and Maintenance Plan for PM₁₀.

California Environmental Quality Act

Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires discussion of any inconsistencies between the project and applicable general plans and regional plans, including the applicable air quality attainment or maintenance plan (or SIP).

2.1.3 Local Regulations

CEQA Air Quality Handbook

The ICAPCD adopted its *CEQA Air Quality Handbook: Guidelines for the Implementation of the California Environmental Quality Act of 1970* in 2007 and amended the handbook in December 2017 (ICAPCD 2017a). The ICAPCD CEQA Air Quality Handbook provides guidance on how to determine the significance of impacts, including air pollutant emissions, related to the development of residential, commercial, and industrial projects. Where impacts are determined to be significant, the ICAPCD CEQA Air Quality Handbook provides guidance to mitigate adverse impacts to air quality from development projects.

Stationary Source Permitting

Pursuant to ICAPCD Rule 207 (New & Modified Stationary Source Review) and associated rules such as Rule 201 (Permits Required) and Rule 208 (Permit to Operate), the construction, installation, modification, replacement, and operation of any equipment which may emit air contaminants requires ICAPCD permits. The ICAPCD requires that all such equipment be assessed for the potential to result in health risk impacts, and permits to operate equipment must be renewed each year equipment is in use or upon the modification of equipment.

Policy Number 5–Off-site Mitigation/In-Lieu Fee

The ICAPCD issued Policy Number 5, Off-site Mitigation/In-lieu Fee in April 2014. The policy references the ICAPCD CEQA Air Quality Handbook and discusses how project proponents may achieve additional mitigation by either proposing an off-site mitigation project or paying an in-lieu mitigation fee. Mitigation fees collected by the ICAPCD are used to fund the emissions offsets projects through the ICAPCD Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program). Specific projects funded by the program achieve emissions reductions by replacing old, highly polluting equipment with newer, cleaner equipment earlier than required by regulation or through normal attrition. As outlined in Policy Number 5, total in-lieu fees for mitigation of construction emissions are calculated based on the quantity and duration of the project's construction emissions and the cost-effectiveness of the Carl Moyer Program for offsetting oxides of nitrogen (NO_x) and PM₁₀ emissions.

Operational Development Fee Mitigation Program

Adopted in November 2007, Rule 310, Operational Development Fee Mitigation Program, is designed to assist in the reduction of excess air emissions resulting from new residential and commercial development (warehousing is considered a commercial use under the program) in Imperial County. Funds collected by the program are used to offset NO_x and PM₁₀ emissions through local emission reduction projects, such as paving unpaved roadways to reduce fugitive dust.

Fugitive Dust Control

The ICAPCD Regulation VIII regulates emissions of fugitive dust. Fugitive dust is:

Particulate Matter entrained in the ambient air which is caused from man-made and natural activities such as, but not limited to, movement of soil, vehicles, equipment, blasting, and wind. This excludes Particulate Matter emitted directly in the exhaust of motor vehicles or other fuel combustion devices, from portable brazing, soldering, or welding equipment, pile drivers, and stack emissions from stationary sources (ICAPCD, Rule 800 (c)(18)).

Regulation VIII includes the following specific rules:

- Rule 800–Fugitive Dust Requirements for Control of PM_{2.5}
- Rule 801–Construction and Earthmoving Activities
- Rule 802–Bulk Materials
- Rule 803–Carry Out and Track Out
- Rule 804–Open Areas
- Rule 805–Paved and Unpaved Roads
- Rule 806–Conservation Management Practices

ICAPCD Rule 428

Adopted on September 11, 2018, Rule 428, Wood Burning Appliances, is to limit emissions of particulate matter from wood burning appliances. This rule applies to any person who manufactures, sells, offers for sale, or operates a permanently installed, indoor or outdoor, wood burning appliance within the Imperial County PM_{2.5} nonattainment area. This rule also applies to any person who installs a wood burning appliance in any residential or commercial, single- or multi-building unit within the Imperial County PM_{2.5} nonattainment area.

2.2 Existing Air Quality

2.2.1 Climate and Meteorology

Climate conditions at the project site, like the rest of Imperial County, are governed by the large-scale sinking and warming of air in the semi-permanent tropical high-pressure center of the Pacific Ocean. The high-pressure ridge blocks out most storms except in winter when it is weakest and farthest south. The coastal mountains prevent the intrusion of any cool, damp air found in California coastal environs. Because of the barrier and weakened storms, Imperial County experiences clear skies, extremely hot summers, mild winters, and little rainfall (ICAPCD 2017b).

Winters are mild and dry with daily average temperatures ranging between 65 and 75 degrees Fahrenheit. Summers are extremely hot with daily average temperatures ranging between 104 and 115 degrees Fahrenheit. The flat terrain and the strong temperature differentials created by intense solar heating result in moderate winds and deep thermal

convection. The combination of subsiding air, protective mountains, and distance from the ocean all combine to severely limit precipitation (ICAPCD 2017b).

Imperial County experiences surface inversions almost every day of the year. Due to strong surface heating, these inversions are usually broken and allow pollutants to be more easily dispersed. In some circumstances, the presence of the Pacific high-pressure cell can cause the air to warm to a temperature higher than the air below. This highly stable atmospheric condition, termed a subsidence inversion, can act as a nearly impenetrable lid to the vertical mixing of pollutants. The strength of these inversions makes them difficult to disrupt. Consequently, they can persist for one or more days, causing air stagnation and the buildup of pollutants. Highest and worst-case ozone levels are often associated with the presence of subsidence inversions (ICAPCD 2017b).

The large daily oscillation of temperature produces a corresponding large variation in the relative humidity. Nocturnal humidity rises to 50 to 60 percent but drops to about 10 percent during the day. Prevailing winds are from the west-northwest through southwest; a secondary flow maximum from the southeast is also evident. The prevailing winds from the west and northwest occur seasonally from fall through spring and are known to be from the Los Angeles area. Occasionally, Imperial County experiences periods of extremely high wind speeds. Wind speeds can exceed 31 miles per hour (mph), and this occurs most frequently during the months of April and May. However, speeds of less than 6.8 mph account for more than one-half of the observed wind measurements (ICAPCD 2017b).

2.2.2 Background Air Quality

Air quality at a particular location is a function of the kinds, amounts, and dispersal rates of pollutants being emitted into the air locally and throughout the basin. The major factors affecting pollutant dispersion are wind speed and direction, the vertical dispersion of pollutants (which is affected by inversions), and the local topography.

Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by the CARB or federal standards set by the U.S. EPA. The ICAPCD maintains air quality monitoring stations throughout the SSAB. Air pollutant concentrations and meteorological information are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

The Westmoreland monitoring station, located at 202 W 1st Street, approximately 5 miles northeast of the project site, and the El Centro – 9th Street monitoring station, located at 150 9th Street, approximately 13 miles south of the project site, are the nearest stations to the project site. The Westmoreland monitoring station measures ozone and PM₁₀, and the El Centro monitoring station measures ozone, NO₂, PM₁₀, and PM_{2.5}. Table 2 provides a summary of measurements collected at the El Centro monitoring station for the years 2020 through 2024.

Table 2 Summary of Air Quality Measurements Recorded at the Westmoreland and El Centro Monitoring Stations					
Pollutant/Standard	2020	2021	2022	2023	2024
WESTMORELAND MONITORING STATION					
Ozone					
Federal Max 8-hour (ppm)	0.059	0.072	0.067	0.084	0.072
Days 2015 Federal 8-hour Standard Exceeded (0.07 ppm)	0	1	0	6	1
Days 2008 Federal 8-hour Standard Exceeded (0.075 ppm)	0	0	0	1	0
State Max 8-hour (ppm)	0.059	0.073	0.068	0.084	0.072
Days State 8-hour Standard Exceeded (0.07 ppm)	0	1	0	7	2
Max. 1-hour (ppm)	0.067	0.081	0.085	0.090	0.092
Days State 1-hour Standard Exceeded (0.09 ppm)	0	0	0	0	0
PM ₁₀ *					
Federal Max. Daily (µg/m ³)	286.8	547.1	867.2	610.2	461.7
Measured Days Federal 24-hour Standard Exceeded (150 µg/m ³)	2	3	19	14	5
Calculated Days Federal 24-hour Standard Exceeded (150 µg/m ³)	2.0	3.0	19.4	14.4	5.1
Federal Annual Average (µg/m ³)	40.1	45.0	58.5	48.8	40.5
State Max. Daily (µg/m ³)	297.2	543.1	896.2	621.5	466.5
Measured Days State 24-hour Standard Exceeded (50 µg/m ³)	89	104	123	82	71
Calculated Days State 24-hour Standard Exceeded (50 µg/m ³)	91.3	105.5	125.6	86.9	72.3
State Annual Average (µg/m ³)	40.2	44.7	60.0	44.9	40.4
EL CENTRO MONITORING STATION					
Ozone					
Federal Max 8-hour (ppm)	0.077	0.083	0.078	0.091	0.139
Days 2015 Federal 8-hour Standard Exceeded (0.07 ppm)	2	6	10	15	11
Days 2008 Federal 8-hour Standard Exceeded (0.075 ppm)	1	2	3	7	5
State Max 8-hour (ppm)	0.077	0.084	0.079	0.091	0.140
Days State 8-hour Standard Exceeded (0.07 ppm)	2	7	10	15	12
Max. 1-hour (ppm)	0.097	0.096	0.113	0.100	0.164
Days State 1-hour Standard Exceeded (0.09 ppm)	1	1	2	5	4
Nitrogen Dioxide					
Max 1-hour (ppm)	0.0448	0.0558	0.0513	0.0507	0.0721
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0	0	0
Days Federal 1-hour Standard Exceeded (0.100 ppb)	0	0	0	0	0
Annual Average (ppm)	--	--	--	0.006	0.006
PM ₁₀ *					
Federal Max. Daily (µg/m ³)	197.5	194.5	554.6	231.6	194.9
Measured Days Federal 24-hour Standard Exceeded (150 µg/m ³)	2	1	2	3	3
Calculated Days Federal 24-hour Standard Exceeded (150 µg/m ³)	2.0	1.0	2.1	3.0	3.1
Federal Annual Average (µg/m ³)	41.5	41.8	44.7	36.7	40.2
State Max. Daily (µg/m ³)	197.7	186.9	553.6	224.0	195.1
Measured Days State 24-hour Standard Exceeded (50 µg/m ³)	92	88	97	64	75
Calculated Days State 24-hour Standard Exceeded (50 µg/m ³)	92.0	88.6	99.3	64.8	76.4
State Annual Average (µg/m ³)	41.5	41.6	45.5	36.7	40.1
PM _{2.5} *					
Federal Max. Daily (µg/m ³)	28.5	19.1	30.6	42.0	23.6
Measured Days Federal 24-hour Standard Exceeded (35 µg/m ³)	0	0	0	1	0
Calculated Days Federal 24-hour Standard Exceeded (35 µg/m ³)	0.0	0.0	0.0	--	0.0
Federal Annual Average (µg/m ³)	9.7	8.3	8.8	--	7.1
State Max. Daily (µg/m ³)	28.5	19.1	30.6	42.0	23.6
State Annual Average (µg/m ³)	9.8	8.3	8.9	--	7.1
SOURCE: CARB 2025.					
ppm = parts per million; µg/m ³ = micrograms per cubic meter; -- = Not available.					
*Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.					

3.0 Thresholds of Significance

Thresholds used to evaluate potential impacts to air quality are based on applicable criteria in the CEQA Guidelines Appendix G. The project would have a significant air quality impact if it would:

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

As stated in the State CEQA Guidelines, these questions are “intended to encourage thoughtful assessment of impacts and do not necessarily represent thresholds of significance” (Title 14, Division 6, Chapter 3 Guidelines for Implementation of the CEQA, Appendix G, Environmental Checklist Form). The State CEQA Guidelines encourage lead agencies to adopt regionally specific thresholds of significance. When adopting these thresholds, the amended Guidelines allow lead agencies to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that the thresholds are supported by substantial evidence.

The ICAPCD CEQA Air Quality Handbook establishes the following four separate evaluation categories (ICAPCD 2017a):

1. Comparison of calculated project emissions to ICAPCD emission thresholds.
2. Consistency with the most recent Clean Air Plan for Imperial County.
3. Comparison of predicted ambient pollutant concentrations resulting from the project to state and federal health standards, when applicable.
4. The evaluation of special conditions which apply to certain projects.

Any development with a potential to emit criteria pollutants below significance levels defined by the ICAPCD is called a “Tier I project,” and is considered by the ICAPCD to have less than significant potential adverse impacts on local air quality. For Tier I projects, the project proponent should implement a set of feasible “standard” mitigation measures (enumerated by the ICAPCD) to reduce the air quality impact to an insignificant level. A “Tier II project” is one whose emissions exceed any of the thresholds. Its impact is significant and the project proponent should select and implement all feasible “discretionary” mitigation measures (also enumerated by the ICAPCD) in addition to the standard measures.

3.1 Operational Impacts

Table 3 provides general guidelines for determining the significance of impacts based on the total emissions that are expected from project operation established by the ICAPCD.

Table 3 Significance Thresholds for Operations		
Pollutant	Tier I	Tier II
NO _x and ROG	Less than 137 lbs/day	137 lbs/day and greater
PM ₁₀ and SO _x	Less than 150 lbs/day	150 lbs/day and greater
CO and PM _{2.5}	Less than 550 lbs/day	550 lbs/day and greater
ROG = reactive organic gas; NO _x = oxides of nitrogen; SO _x = oxides of sulfur; CO = carbon monoxide; PM ₁₀ = particulate matter with an aerodynamic diameter 10 microns or less; PM _{2.5} = particulate matter with an aerodynamic diameter 2.5 microns or less; lbs/day = pounds per day SOURCE: ICAPCD 2017a.		

As stated above, Tier 1 projects are required to implement all feasible standard measures specified by the ICAPCD. Tier II projects are required to implement all feasible standard measures as well as all feasible discretionary measures specified by the ICAPCD.

3.2 Construction Impacts

The ICAPCD has also established thresholds of significance for project construction. Table 4 provides general guidelines for determining significance of impacts based on the total emissions that are expected from project construction.

Table 4 Significance Thresholds for Construction	
Pollutant	Thresholds (pounds/day)
PM ₁₀	150
ROG	75
NO _x	100
CO	550
ROG = reactive organic gas; NO _x = oxides of nitrogen; CO = carbon monoxide; PM ₁₀ = particulate matter with an aerodynamic diameter 10 microns or less. SOURCE: ICAPCD 2017a.	

Regardless of project size, all feasible standard measures specified by the ICAPCD for construction equipment and fugitive PM₁₀ control for construction activities should be implemented at construction sites. Control measures for fugitive PM₁₀ construction emissions in Imperial County are found in ICAPCD Regulation VIII and in the ICAPCD CEQA Air Quality Handbook and are discussed below.

3.3 Public Nuisance Law (Odors)

State of California Health and Safety Code Sections 41700 and 41705 and ICAPCD Rule 407 prohibit emissions from any source whatsoever in quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public health or damage to property.

The ICAPCD CEQA Air Quality Handbook provides screening level distances for potential odor sources. If a project is proposed within one mile of a wastewater treatment plant, sanitary landfill, composting station, feedlot, asphalt plant, painting and coating operation, or rendering plant, a potential odor problem may result (ICAPCD 2017a).

4.0 Emission Calculations

The project would generate air pollutant emissions during both construction and operation. Emissions were calculated using California Emissions Estimator Model (CalEEMod) Version 2022.1.1.44 (California Air Pollution Control Officers Association 2022). The CalEEMod program is a tool used to estimate emissions resulting from land development projects in the state of California. CalEEMod was developed with the participation of several state air districts.

CalEEMod estimates parameters such as the type and amount of construction equipment required, trip generation, and utility consumption based on the size and type of each specific land use using data collected from surveys performed by the South Coast Air Quality Management District (AQMD). Where available, parameters were modified to reflect project-specific data.

4.1 Construction-related Emissions

Construction-related activities are temporary, short-term sources of air pollutant emissions. Sources of construction-related emissions include the following:

- Fugitive dust from grading activities;
- Exhaust emissions from construction equipment;
- Application of chemical coatings (paints, stains, sealants, etc.); and
- Exhaust and fugitive dust emission from on-road vehicles (trips by workers, delivery trucks, and material-hauling trucks).

Heavy-duty construction equipment is usually diesel powered. Based on CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation, heavy-duty construction equipment includes off-road diesel vehicles 25 horsepower or greater. In general, emissions from diesel-powered equipment contain more NO_x, SO_x, and particulate matter than gasoline-powered engines. However, diesel-powered engines generally produce less CO and less ROG than gasoline-powered engines. Standard construction equipment includes tractors/loaders/backhoes, rubber-tired dozers, excavators, graders, cranes, forklifts, rollers, paving equipment, generator sets, welders, cement and mortar mixers, and air compressors.

Primary inputs are the numbers of each piece of equipment and the length of each construction stage. The construction equipment estimates are based on surveys performed by the South Coast AQMD and the Sacramento Metropolitan AQMD of typical construction projects which provide a basis for scaling equipment needs and schedule with a project's size. Air emission estimates in CalEEMod are based on the duration of construction phases; construction equipment type, quantity, and usage; grading area; season; and ambient temperature, among other parameters.

Construction activities were modeled beginning in January 2027 and lasting approximately 13 months, which is the default duration. Construction stages would include demolition, site preparation, grading, building construction, paving, and architectural coatings. All default phase lengths were modeled, and architectural coatings were modeled during the last 20 percent of the building construction phase, since painting of constructed buildings and units would begin as construction of additional buildings and units commenced.

4.1.1 Fugitive Dust

Fugitive dust would be associated with construction activities that involve ground disturbance. Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Calculation of fugitive dust emissions are based on the area of disturbed ground and the fugitive dust measures implemented. Based on discussion with ICAPCD staff, watering during ground disturbing activities would achieve a 50 percent reduction in fugitive dust.

The ICAPCD requires that, regardless of the size of a project, all feasible standard measures for fugitive PM₁₀ must be implemented at construction sites. Additionally, all feasible discretionary measures for PM₁₀ apply to those construction sites that are 5 acres or more for non-residential developments or 10 acres or more in size for residential developments. Because the project footprint consists of 7.87 acres, discretionary measures for PM₁₀ would not apply. Standard measures from the ICAPCD handbook that would be implemented during construction include the following:

Standard Measures for Fugitive PM₁₀ Control:

- a) All disturbed areas, including bulk material storage which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material such as vegetative ground cover.
- b) All on-site and off-site unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.
- c) All unpaved traffic areas one acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emission shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering. The transport of bulk materials shall be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material.
- d) The transport of bulk materials shall be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material.
- e) All track-out or carry-out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.
- f) Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers or by sheltering or enclosing the operation and transfer line.
- g) The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a temporary unpaved road. Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.

4.1.2 Construction Equipment

CalEEMod calculates emissions of all pollutants from construction equipment using emission factors from CARB's off-road diesel equipment emission factors database. All default construction equipment was modeled. The modeled construction equipment is presented in Table 5.

Table 5 Construction Phases and Equipment		
Equipment	Quantity	Daily Operation Time (hours)
Demolition (20 days)		
Concrete/Industrial Saws	1	8
Excavators	3	8
Rubber Tired Dozers	2	8
Site Preparation (10 days)		
Rubber Tired Dozers	3	8
Tractors/Loaders/Backhoes	4	8
Grading (20 days)		
Excavators	1	8
Graders	1	8
Rubber Tired Dozers	1	8
Tractors/Loaders/Backhoes	3	8
Building Construction (230 days)		
Cranes	1	7
Forklifts	3	8
Generator Sets	1	8
Tractors/Loaders/Backhoes	3	7
Welders	1	8
Architectural Coatings (46 days)		
Air Compressors	1	6
Paving (20 days)		
Pavers	2	8
Paving Equipment	2	8
Rollers	2	8
NOTE: Each phase would also include vehicles associated with work commutes, dump trucks for hauling, and trucks for deliveries.		

The ICAPCD requires that, regardless of the size of a project, all feasible standard measures for construction equipment must be implemented at construction sites. Standard measures from the ICAPCD handbook that would be implemented during construction include the following:

Standard Measures for Construction Combustion Equipment

- Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
- Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use.

- d) Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

4.1.3 On-Road Vehicles

Construction would generate mobile source emissions from worker trips, hauling trips, and vendor trips. CalEEMod calculates emissions of all pollutants from on-road trucks and passenger vehicles using emission factors derived from CARB's motor vehicle emission inventory program EMFAC2021 (CARB 2021). Vehicle emission factors were multiplied by the model default total estimated number of trips and the average trip length to calculate the total mobile emissions. The project would require up to 104 workers per day, 12 hauling trips per day, and 15 deliveries per day. Default trip lengths were modeled.

CalEEMod calculates dust emissions from travel on paved and unpaved roads. By default, CalEEMod assumes the percentage of paved and unpaved roads for each district as provided by the district. For Imperial County, the default assumption is 50 percent paved and 50 percent unpaved. However, this is not characteristic of the roads in the vicinity of the project site. Construction vehicles would access the site via 100 percent paved roads including State Route 86, Main Street, Rio Vista Avenue, and River Road. It should be noted that Imperial County roadways do experience higher levels of entrained roadway dust. State Route 86, Main Street, and Rio Vista Avenue are surrounded by developed land and do not experience significant amounts of entrained dust. River Road is surrounded by undeveloped dirt lots and may have more entrained dust. To account for these dust emissions on River Road, 98 percent paved roads was modeled in CalEEMod.

4.1.4 Construction Emission Estimates

Table 6 provides a summary of the criteria pollutant emissions generated by the project construction. CalEEMod output files for project construction and operations are contained in Attachment 1.

Table 6 Maximum Daily Construction Air Pollutant Emissions						
Year	Maximum Daily Emissions (pounds)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2027	43	28	29	<1	70	8
2028	43	11	20	<1	70	8
Max Daily Emissions	43	28	29	<1	70	8
<i>Significance Threshold</i>	75	100	550	-	150	-
Exceeds Threshold?	No	No	No	-	No	-
SOURCE: Attachment 1. ROG = reactive organic gas; NO _x = oxides of nitrogen; CO = carbon monoxide; PM ₁₀ = particulate matter with an aerodynamic diameter 10 microns or less; PM _{2.5} = particulate matter with an aerodynamic diameter 2.5 microns or less.						

As shown in Table 6, construction emissions would not exceed any of the applicable ICAPCD significance thresholds for criteria pollutants. The emissions summarized in Table 6 account for the 50 percent reduction in dust due to daily watering, limiting speed to 25 miles per hour on unpaved roads, and street sweeping once per month, but do not account for any other emission reductions from any other standard measure for dust control or construction equipment. Therefore, these emissions are conservative. Implementation of the standard measures for fugitive PM₁₀ control and standard measures for construction combustion equipment would further reduce emissions below what is presented in Table 6.

4.2 Operation-related Emissions

Operation-related sources of air pollutant emissions include the direct emission of criteria pollutants. Common direct emission sources associated with typical projects include mobile sources such as project-generated traffic, area sources such as the use of landscaping equipment, consumer products, and architectural coatings, and energy sources such as the combustion of natural gas.

4.2.1 Mobile Sources

CalEEMod calculates mobile source emissions using emission factors derived from CARB's motor vehicle emission inventory program, EMFAC2021 (CARB 2021). The project would generate 931 weekday trips (Linscott, Law & Greenspan Engineers, Inc. [LLG] 2025a). Weekend trip rates modeled in CalEEMod were adjusted proportionately. Note that average daily trips generated for the Local Mobility Analysis was based on a maximum development of 144 units, which provides a conservative analysis compared to the current project design of 133 units. The Air Quality Analysis utilizes average daily trips generated in the Local Mobility Analysis. Therefore, the volumes modeled in this analysis are conservative. CalEEMod default trip lengths and emission factors for the soonest operational year of 2028 were modeled. Residents would access the site via 100 percent paved roads.

4.2.2 Area Sources

Area sources of emissions include fireplaces, consumer products, architectural coatings, and landscaping equipment. CalEEMod calculates the emissions from wood stoves and fireplaces. The project would not include wood stoves or fireplaces.

Consumer products are chemically formulated products used by household and institutional consumers, including but not limited to detergents, cleaning compounds, polishes, floor finishes, disinfectants, sanitizers, and aerosol paints, but do not include other paint products, furniture coatings, or architectural coatings.

For architectural coatings, emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. Emission estimates are based on the parking lot surface area, architectural coating emission factors, and a reapplication rate of 10 percent of area per year. Architectural coatings would comply with ICAPCD Rule 424, which limits the volatile organic compound content of paints sold within the County.

Landscaping maintenance includes fuel combustion emission from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chainsaws, and hedge trimmers, as well as air compressors, generators, and pumps. Emission calculations take into account building area, equipment emission factors, and the number of operational days (summer days).

4.2.3 Energy Sources

Energy source emissions associated with the project include natural gas used in space and water heating. Emissions are generated from the combustion of natural gas used in space and water heating. Emissions are based on the Residential Appliance Saturation Survey which is a comprehensive energy use assessment that includes the end use for various climate zones in California.

4.2.4 Stationary Source

The project would include the construction of a sewer lift station at the southeast corner of the project site near the intersection of River Drive and Rio Vista Avenue. The exact design of the sewer lift station is not known at this time.

Sewer lift stations may require an emergency generator. It should be noted that use of the generator is foreseeable during an emergency power outage; however, the number of hours that the generator would operate in emergency situations is speculative, and emissions associated with emergency operation were not calculated. However, the generator would require routine testing, and emissions associated with this testing were modeled using CalEEMod. Emissions were calculated assuming a 400-horsepower generator would be tested a maximum of one hour in a day and a total of 50 hours per year. Note that the emergency generator would be required to go through a permitting process with ICAPCD to obtain a Permit to Operate.

4.2.5 Operational Emission Estimates

Table 7 provides a summary of the criteria pollutant emissions that would be generated during project operation. CalEEMod output files for project construction and operations are contained in Attachment 1.

Table 7 Maximum Daily Operations Air Pollutant Emissions						
Emission Source	Maximum Daily Emissions (pounds)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Mobile Sources	4	2	23	<1	4	1
Area Sources	4	<1	8	<1	<1	<1
Energy Sources	<1	<1	<1	<1	<1	<1
Stationary Sources	1	2	2	<1	<1	<1
Total Operations	9	5	33	<1	4	1
<i>Significance Threshold</i>	<i>137</i>	<i>137</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>550</i>
Exceeds Threshold?	No	No	No	No	No	No
SOURCE: Attachment 1. NOTE: Totals may vary due to independent rounding. ROG = reactive organic gas; NO _x = oxides of nitrogen; CO = carbon monoxide; PM ₁₀ = particulate matter with an aerodynamic diameter 10 microns or less; PM _{2.5} = particulate matter with an aerodynamic diameter 2.5 microns or less.						

As shown in Table 7, operational emissions would not exceed any of the applicable ICAPCD thresholds for criteria pollutants.

5.0 Air Quality Impact Analysis

1. Would the project conflict with or obstruct implementation of the applicable air quality plan?

CARB is the lead agency for preparation of the SIP, which outlines the state measures to achieve NAAQS. CARB delegates responsibility for preparation of SIP elements to local air districts and requires local air districts to prepare Air Quality Attainment Plans outlining measures required to achieve CAAQS.

The ICAPCD is the air district responsible for the project area. Applicable ICAPCD air quality plans include:

- Imperial County 2009 State Implementation Plan for Particulate matter Less than 10 Microns in Aerodynamic Diameter;
- Imperial County 2013 State Implementation Plan for the 2006 24-Hour PM_{2.5} Moderate Non-attainment Area; and

- Imperial County 2017 State Implementation Plan for the 2008 8-Hour Ozone Standard;
- Imperial County 2018 State Implementation Plan for the 2012 Annual Standard for PM_{2.5}; and
- Imperial County 2018 Redesignation Request and Maintenance Plan for PM₁₀.

These air quality attainment plans are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls describing how the state will attain ambient air quality standards. The primary concern for assessing consistency with air quality plans is whether the project would induce growth that would result in a net increase in criteria pollutant emissions that exceed the assumptions used to develop the plan. The criteria pollutant emission projections for the ICAPCD air quality plans are based on Southern California Association of Governments' (SCAG) population growth and regional vehicle miles traveled projections, which are based in part on the land uses established by local general plans. As such, projects that propose development that is consistent with the local land use plans would be consistent with growth projections and air quality plans criteria pollutant emissions estimates. In the event that a project would result in development that is less dense than anticipated by the growth projections, the project would be considered consistent with the air quality plans. In the event a project would result in development that results in greater than anticipated growth projections, the project would result in air pollutant emissions that may not have been accounted for in the air quality plans and thus may obstruct or conflict with the air quality plans.

A portion of the project site is currently designated as an Urban Area in the County's General Plan and is zoned A-2-U (General Agricultural). The Urban Area designation includes areas surrounding the following seven incorporated cities: Brawley, El Centro, Westmorland, Holtville, Calipatria, Imperial, and Calexico. It is anticipated that these areas will eventually be annexed or incorporated. The portion of the project site that is located within the City is designated as Rural Residential in the City's General Plan and is zoned R-E (Residential Estate). The project site would be annexed into the City and would require a General Plan Amendment to designate the entire site as Residential Medium Density and a Zoning Amendment to zone the site as R-3 (Residential Medium Density). Although the change in land use designation would result in more units on the project site than what would be allowed under the current designations, it would not result in growth beyond what is anticipated in the City. The project would help the City achieve its housing goals as required by the Regional Housing Needs Allocation (RHNA) and outlined in the City's Housing Element of the General Plan. The City's share of the RHNA is 1,426 housing units, which is accounted for in SCAG's population growth and regional vehicle miles traveled projections. Consequently, the project would not exceed the emissions budgets established by the ICAPCD. Therefore, the project would not conflict with or obstruct implementation of any air quality plans, and impacts would be less than significant.

Additionally, a project would be inconsistent with the ICAPCD air quality plans if it would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations, as determined by a comparison of project emissions to ICAPCD significance thresholds. As shown in Tables 6 and 7 above, emissions generated during construction and operation of the project would not exceed any of the applicable ICAPCD significance thresholds for criteria pollutants. Additionally, the project would comply with ICAPCD Rules and Regulations, specifically Rule 310 and Regulation VIII. Rule 310 requires the payment of development fees that will assist the ICAPCD in attaining the state and federal air quality standards for ozone and PM₁₀. Regulation VIII includes Rules 800 through 806 that reduce dust emissions associated with construction. Additionally, the project would result in less than significant impacts related to vehicle miles traveled, because it would be located in an area where vehicle miles traveled is only 72 percent of the regional average (LLG 2025b). Consequently, the project would support the goals of the applicable air quality plans by reducing mobile source emissions. Through compliance with applicable ICAPCD rules, regulations, and requirements for controlling emissions, and because maximum daily pollutant

emissions projected to result from the project would be below ICAPCD significance thresholds, the project would not conflict with or obstruct implementation of any air quality plans, and impacts would be less than significant.

2. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

The project site is in non-attainment areas for NAAQS and CAAQS for ozone and particulate matter. The majority of regional PM₁₀ and PM_{2.5} emissions originate from dust stirred up by wind or by vehicle traffic on unpaved roads (ICAPCD 2009). Other PM₁₀ and PM_{2.5} emissions originate from grinding operations, combustion sources such as motor vehicles, power plants, wood burning, forest fires, agricultural burning, and industrial processes. Ozone is not emitted directly, but is a result of atmospheric activity on precursors. NO_x and ROG are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone. Approximately 88 percent of NO_x and 40 percent of ROG regional emissions originate from on- and off-road vehicles (ICAPCD 2010). Other major sources include solvent evaporation and miscellaneous processes such as pesticide application.

As shown in Table 6 above, construction emissions would not exceed any of the applicable ICAPCD significance thresholds for criteria pollutants. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. The project would implement all standard measures for fugitive PM₁₀ control and standard measures for construction combustion equipment, which would further reduce emissions below what is presented in Table 6. Therefore, project construction would not result in a cumulatively considerable net increase in emissions of ozone, PM₁₀, or PM_{2.5}, and impacts would be less than significant.

Long-term emissions of regional air pollutants occur from operational sources. As shown in Table 7 above, operational emissions would not exceed any of the ICAPCD significance thresholds for criteria pollutants. Therefore, project operation would not result in a cumulatively considerable net increase in emissions of ozone, PM₁₀, or PM_{2.5}, and impacts would be less than significant.

3. *Would the project expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, day-care centers and project residents) to substantial pollutant concentrations?*

Sensitive land uses include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities. The nearest sensitive receptors are the residential uses located approximately 35 feet east of the project site.

Diesel Particulate Matter – Construction

Construction of the project would result in short-term diesel exhaust emissions from on-site heavy-duty equipment. Construction of the project would result in the generation of diesel-exhaust DPM emissions from the use of off-road diesel equipment required for site preparation and grading, and other construction activities and on-road diesel equipment used to bring materials to and from the project site.

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction is anticipated to last for approximately 13 months. The dose of DPM to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period;

however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Thus, if the duration of proposed construction activities near any specific sensitive receptor were 13 months, the exposure would be less than 4 percent (13 months divided by 30 years (360 months)) of the total exposure period used for health risk calculation. Further, the project would implement the standard measures for construction combustion equipment summarized in Section 4.1.2 above. Additionally, with ongoing implementation of U.S. EPA and CARB requirements for cleaner fuels; off-road diesel engine retrofits; and new, low-emission diesel engine types, the DPM emissions of individual equipment would be reduced over time. All construction equipment is subject to the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation, which limits unnecessary idling to 5 minutes, requires all construction fleets to be labeled and reported to CARB, bans Tier 0 equipment and phases out Tier 1 and 2 equipment (thereby replacing fleets with cleaner equipment), and requires that fleets comply with Best Available Control Technology requirements. Therefore, due to the limited duration of construction activities, implementation of standard measures for construction combustion equipment, and implementation of the In-Use Off-Road Diesel-Fueled Fleets Regulation, DPM generated by project construction is not expected to create conditions where the probability is greater than 10 in 1 million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than 1 for the Maximally Exposed Individual. Therefore, project construction would not expose sensitive receptors to substantial pollutant concentration, and impacts would be less than significant.

Carbon Monoxide Hot Spots

A CO hot spot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near signalized intersections. CO hot spots have the potential to violate state and federal CO standards at intersections, even if the broader basin is in attainment for federal and state levels. Due to increased requirements for cleaner vehicles, equipment, and fuels, CO levels in the state have dropped substantially. All air basins are attainment or maintenance areas for CO. Therefore, recent screening procedures based on more current methodologies have been developed. The Bay Area Air Quality Management District (BAAQMD) developed a screening threshold in their 2022 CEQA Guidelines (BAAQMD 2022). These screening criteria are considered applicable in the City because the San Francisco Bay Air Basin and the SSAB have the same CO maintenance designations and the vehicle classifications in the regions are similar. If the following screening criteria are met, a project would result in less than significant impacts related to CO:

- The project is consistent with an applicable congestion management program established by the County congestion management agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- Project-generated traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- Project-generated traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Intersection turning volumes were obtained from the Local Mobility Analysis prepared for the project (LLG 2025a). Based on this analysis, peak hour intersection turning volumes with the project would be 1,525 vehicles per hour or less. This maximum hourly turning volume would occur at the intersection of W Main Street and Western Avenue. Peak hour volumes would be well less than the BAAQMD screening levels. Therefore, project construction and operation would not result in a CO hot spot, and impacts would be less than significant.

4. *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

The potential for an odor impact is dependent on a number of variables including the nature of the odor source, distance between the receptor and odor source, and local meteorological conditions. Project construction would result in the emission of diesel fumes and other odors typically associated with construction activities. Sensitive receptors near the project site include residential uses; however, exposure to odors associated with project construction would be short term (13 months) and temporary in nature. Further, per CARB's Airborne Toxic Control Measures 13 (California Code of Regulations Chapter 10 Section 2485), the applicant shall not allow idling time to exceed 5 minutes unless more time is required per engine manufacturers' specifications or for safety reasons. Therefore, project construction would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

The ICAPCD CEQA Air Quality Handbook provides screening level distances for potential odor sources. If a project is proposed within one mile of a wastewater treatment plant, sanitary landfill, composting station, feedlot, asphalt plant, painting and coating operation, or rendering plant, a potential odor problem may result (ICAPCD 2017a). The project does not include the construction of any of these uses. Residential uses are not known to emit odors during operation. The project would include a sewer lift station. Sewer lift stations are normally equipped with an odor control system. Specifications for a sample odor control system are provided in Attachment 2. With proper installation and maintenance of this system, which would be performed by the homeowners association, odor impacts associated with the sewer lift station would be less than significant. The exact design and equipment requirements for the sewer lift station are not known at this time. To ensure that odors associated with the sewer lift station would be controlled, the following mitigation measure would be required:

MM-AQ-1: The design of the sewer lift station shall include all necessary odor control systems. Documentation of proper odor control measures shall be submitted to the City prior to the issuance of building permits for the sewer lift station.

With implementation of this measure, project operation would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

6.0 Conclusions

The project's potential to result in impacts to air quality was assessed in accordance with the guidelines, policies, and standards established by the ICAPCD. The applicable ICAPCD air quality plans include the 2009, 2013, and 2017 SIPs for reducing PM₁₀, PM_{2.5}, and ozone. The project would help the City achieve its housing goals as required by the RHNA and outlined in the City's Housing Element of the General Plan. The City's share of the RHNA is 1,426 housing units, which is accounted for in SCAG's population growth and regional vehicle miles traveled projections. Consequently, the project would not exceed the emissions budgets established by the ICAPCD. The project is required to comply with applicable ICAPCD rules, regulations, and requirements for controlling emissions, and maximum daily pollutant emissions would be below ICAPCD significance thresholds. Therefore, the project would not conflict with or obstruct the implementation of the regional air quality plans, and impacts would be less than significant.

As shown in Table 6 above, construction emissions would not exceed any of the applicable ICAPCD significance thresholds for criteria pollutants. The project would implement all standard measures for fugitive PM₁₀ control and standard measures for construction combustion equipment which would further reduce emissions below what is presented in Table 6. As shown in Table 7 above, operational emissions would not exceed any of the applicable

ICAPCD significance thresholds for criteria pollutants. Therefore, project construction and operation would not result in a cumulatively considerable net increase in emissions of ozone, PM₁₀, or PM_{2.5}, and impacts would be less than significant.

Project construction would not expose sensitive receptors to significant levels of DPM that could result in excess cancer risks. Additionally, the project would not result in the creation of a CO hot spot. Therefore, construction and operation of the project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

During construction, potential odor sources would be associated with construction equipment; however, exposure to odors associated with project construction would be short term and temporary in nature. Operation of the project would not include any uses that would generate substantial odors. To ensure that odors associated with the sewer lift station would be controlled, the following mitigation measure would be required:

MM-AQ-1: The design of the sewer lift station shall include all necessary odor control systems. Documentation of proper odor control measures shall be submitted to the City prior to the issuance of building permits for the sewer lift station.

With implementation of this measure, the project would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

If you have any questions about the results of this analysis, please contact me at jfleming@reconenvironmental.com or (619) 308-9333 extension 177.

Sincerely,



Jessica Fleming
Senior Air Quality Specialist

JLF:sjg

Attachment

7.0 Certification

The following is a list of preparers, persons, and organizations involved with the air quality analysis.

RECON Environmental, Inc.

Jessica Fleming, Senior Noise, Air Quality, and GHG Specialist

Steven Gaughran, Production Specialist

Frank McDermott, GIS Manager

8.0 References Cited

Bay Area Air Quality Management District (BAAQMD)

- 2022 California Environmental Quality Act Air Quality Guidelines.

California Air Pollution Control Officers Association (CAPCOA)

- 2022 California Emissions Estimator Model (CalEEMod), Version 2022.1.

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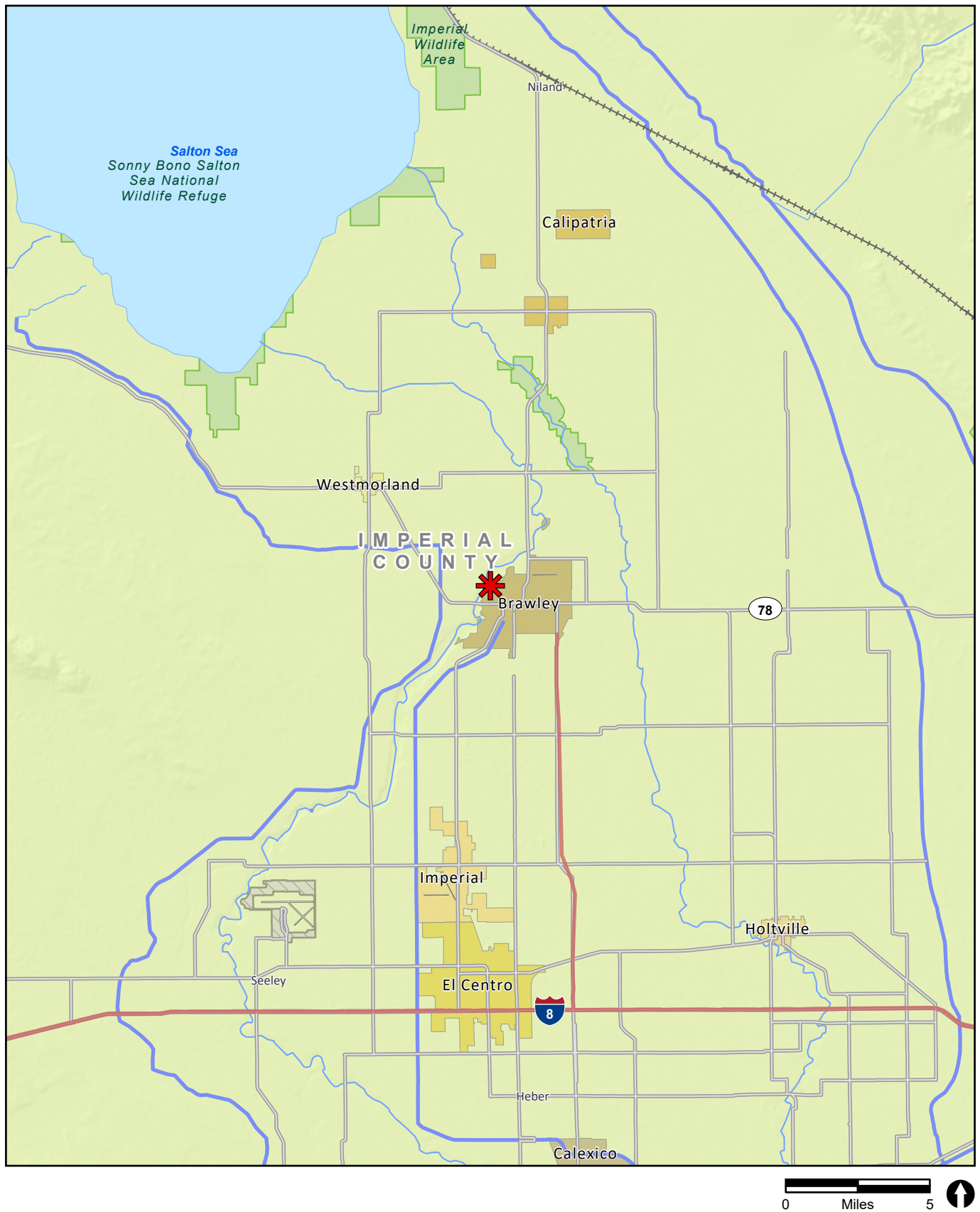
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- 2010 2009 1997 8-Hour Ozone Modified Air Quality Management Plan. July.
- 2017a *CEQA Air Quality Handbook, Guidelines for the Implementation of the California Environmental Quality Act of 1970*. December.
- 2017b 2017 Imperial County State Implementation Plan for the 2008 8-Hour Ozone Standard, Draft March.

Linscott, Law & Greenspan Engineers, Inc. (LLG)

- 2025a Local Mobility Analysis for the Rio Vista Apartments Project. LLG Ref. 3-25-4083. September 19, 2025.
- 2025b Vehicle Miles Traveled Assessment for the Rio Vista Apartments Project. LLG Ref. 3-25-4083. September 22, 2025.

Office of Environmental Health Hazard Assessment (OEHHA)

- 2015 Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (Guidance Manual), February.

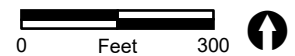


 Project Location

FIGURE 1
Regional Location



-  Project Boundary
-  Off-site Fire Access Road Improvement



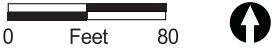


FIGURE 3
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ATTACHMENT 1

CalEEMod Output Files

Rio Vista Apartments Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Rio Vista Apartments
Construction Start Date	1/4/2027
Operational Year	2028
Lead Agency	City of Brawley
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40000
Precipitation (days)	4.80000
Location	32.9871984348776, -115.54870359437074
County	Imperial
City	Brawley
Air District	Imperial County APCD
Air Basin	Salton Sea
TAZ	5602
EDFZ	19
Electric Utility	Imperial Irrigation District
Gas Utility	Southern California Gas
App Version	2022.1.1.44

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	133.000	Dwelling Unit	7.96000	148,316	69,000.0	—	473.000	—

Recreational Swimming Pool	2.00000	1000sqft	0.05000	0.00000	0.00000	—	—	—
Health Club	4.40000	1000sqft	0.10000	4,400.00	0.00000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.87110	1.61796	10.3814	22.7124	0.02708	0.34329	59.0160	59.3593	0.31637	6.07945	6.39582	—	4,297.99	4,297.99	0.15993	0.13130	5.40935	4,346.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	43.6353	43.3503	28.0787	29.2387	0.04891	1.17173	69.8970	70.2593	1.07799	7.19887	7.53276	—	5,517.46	5,517.46	0.22590	0.16169	0.16281	5,538.52
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.83483	3.63148	8.66798	14.3241	0.02035	0.30461	35.6426	35.9472	0.28062	3.85969	4.14031	—	2,946.25	2,946.25	0.11317	0.08560	1.42254	2,976.01
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.69986	0.66274	1.58191	2.61414	0.00371	0.05559	6.50478	6.56037	0.05121	0.70439	0.75561	—	487.786	487.786	0.01874	0.01417	0.23552	492.713
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0000	100.0000	550.000	—	—	—	150.000	—	—	—	—	—	—	—	—	—	—
Unmit.	—	No	No	No	—	—	—	No	—	—	—	—	—	—	—	—	—	—

Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0000	100.0000	550.000	—	—	—	150.000	—	—	—	—	—	—	—	—	—	—
Unmit.	—	No	No	No	—	—	—	No	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.87110	1.61796	10.3814	22.7124	0.02708	0.34329	59.0160	59.3593	0.31637	6.07945	6.39582	—	4,297.99	4,297.99	0.15993	0.13130	5.40935	4,346.52
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	43.6353	43.3503	28.0787	29.2387	0.04891	1.17173	69.8970	70.2593	1.07799	7.19887	7.53276	—	5,517.46	5,517.46	0.22590	0.16169	0.16281	5,538.52
2028	43.5582	43.2785	10.8932	20.2139	0.02882	0.32231	69.8970	70.2193	0.29707	7.19887	7.49593	—	4,414.64	4,414.64	0.13124	0.13871	0.14681	4,459.40
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	3.83483	3.63148	8.66798	14.3241	0.02035	0.30461	35.6426	35.9472	0.28062	3.85969	4.14031	—	2,946.25	2,946.25	0.11317	0.08560	1.42254	2,976.01
2028	2.97421	2.94824	1.08807	2.04673	0.00266	0.03545	5.04282	5.07827	0.03265	0.51948	0.55212	—	394.572	394.572	0.01558	0.01012	0.17712	398.154
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.69986	0.66274	1.58191	2.61414	0.00371	0.05559	6.50478	6.56037	0.05121	0.70439	0.75561	—	487.786	487.786	0.01874	0.01417	0.23552	492.713
2028	0.54279	0.53805	0.19857	0.37353	0.00049	0.00647	0.92031	0.92678	0.00596	0.09480	0.10076	—	65.3259	65.3259	0.00258	0.00168	0.02932	65.9189

2.2.2. Onsite Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.23076	1.02988	9.39093	12.9379	0.02340	0.33657	0.00000	0.33657	0.30965	0.00000	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	0.00000	2,405.30
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	43.0600	42.8353	27.9724	28.2794	0.04891	1.17173	9.82850	11.0002	1.07799	5.05122	6.12922	—	5,297.82	5,297.82	0.21490	0.04298	0.00000	5,316.00
2028	43.0067	42.7908	9.73309	14.0536	0.02513	0.31559	0.00000	0.31559	0.29035	0.00000	0.29035	—	2,530.97	2,530.97	0.10267	0.02053	0.00000	2,539.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	3.49935	3.32868	7.99656	10.1254	0.01795	0.29994	0.50097	0.80091	0.27594	0.23792	0.51386	—	1,858.64	1,858.64	0.07539	0.01508	0.00000	1,865.02
2028	2.93102	2.90952	1.01076	1.47808	0.00244	0.03500	0.00000	0.03500	0.03220	0.00000	0.03220	—	251.198	251.198	0.01019	0.00204	0.00000	252.060
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.63863	0.60748	1.45937	1.84789	0.00328	0.05474	0.09143	0.14617	0.05036	0.04342	0.09378	—	307.719	307.719	0.01248	0.00250	0.00000	308.775
2028	0.53491	0.53099	0.18446	0.26975	0.00044	0.00639	0.00000	0.00639	0.00588	0.00000	0.00588	—	41.5886	41.5886	0.00169	0.00034	0.00000	41.7313

2.2.3. Offsite Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.64034	0.58808	0.99045	9.77441	0.00369	0.00672	59.0160	59.0227	0.00672	6.07945	6.08617	—	1,900.91	1,900.91	0.06269	0.11185	5.40935	1,941.22
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.57538	0.51498	1.23547	6.63494	0.00560	0.01601	69.8970	69.9037	0.01601	7.19887	7.20558	—	1,922.38	1,922.38	0.07926	0.13388	0.16281	1,960.84
2028	0.55148	0.48772	1.16007	6.16034	0.00369	0.00672	69.8970	69.9037	0.00672	7.19887	7.20558	—	1,883.66	1,883.66	0.02858	0.11817	0.14681	1,919.74
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2027	0.33548	0.30280	0.67142	4.19867	0.00239	0.00468	35.1416	35.1463	0.00468	3.62177	3.62645	—	1,087.61	1,087.61	0.03777	0.07052	1.42254	1,110.99
2028	0.04318	0.03872	0.07732	0.56865	0.00022	0.00045	5.04282	5.04327	0.00045	0.51948	0.51992	—	143.375	143.375	0.00539	0.00808	0.17712	146.094
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.06122	0.05526	0.12253	0.76626	0.00044	0.00085	6.41335	6.41420	0.00085	0.66097	0.66183	—	180.067	180.067	0.00625	0.01168	0.23552	183.938
2028	0.00788	0.00707	0.01411	0.10378	0.00004	0.00008	0.92031	0.92040	0.00008	0.09480	0.09489	—	23.7373	23.7373	0.00089	0.00134	0.02932	24.1876

2.3. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.21157	8.90532	4.62325	32.6209	0.05315	0.17023	3.87693	4.04716	0.16729	0.98188	1.14917	84.7642	6,394.83	6,479.60	8.84564	0.26490	13.8953	6,793.57
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.64419	7.37382	4.78745	18.5913	0.04728	0.16640	3.87693	4.04332	0.16441	0.98188	1.14629	84.7642	5,814.18	5,898.94	8.86508	0.27255	1.41556	6,203.21
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.45916	7.23893	3.02844	21.7115	0.04484	0.08338	3.67406	3.75743	0.08102	0.93054	1.01156	84.7642	5,545.22	5,629.99	8.82852	0.25420	6.34223	5,932.79
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.36130	1.32111	0.55269	3.96234	0.00818	0.01522	0.67052	0.68573	0.01479	0.16982	0.18461	14.0337	918.075	932.109	1.46166	0.04209	1.05003	982.242
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	137.000	137.000	550.000	150.000	—	—	150.000	—	—	550.000	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	137.000	137.000	550.000	150.000	—	—	150.000	—	—	550.000	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.4. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.91332	3.73890	2.24416	22.9805	0.04666	0.03187	3.87693	3.90880	0.02989	0.98188	1.01177	—	4,749.33	4,749.33	0.19187	0.22127	12.8119	4,832.88
Area	4.52212	4.48263	0.07306	7.75017	0.00034	0.00387	—	0.00387	0.00292	—	0.00292	0.00000	20.9613	20.9613	0.00088	0.00017	—	21.0351
Energy	0.05489	0.02744	0.47134	0.21648	0.00299	0.03792	—	0.03792	0.03792	—	0.03792	—	1,261.96	1,261.96	0.13282	0.01083	—	1,268.51
Water	—	—	—	—	—	—	—	—	—	—	—	12.1505	26.7720	38.9225	1.24911	0.02999	—	79.0880
Waste	—	—	—	—	—	—	—	—	—	—	—	72.6137	0.00000	72.6137	7.25748	0.00000	—	254.051
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08336	1.08336
Stationary	0.72125	0.65634	1.83469	1.67375	0.00315	0.09656	0.00000	0.09656	0.09656	0.00000	0.09656	0.00000	335.806	335.806	0.01348	0.00263	0.00000	336.927
Total	9.21157	8.90532	4.62325	32.6209	0.05315	0.17023	3.87693	4.04716	0.16729	0.98188	1.14917	84.7642	6,394.83	6,479.60	8.84564	0.26490	13.8953	6,793.57
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.07449	2.89648	2.48142	16.7010	0.04113	0.03191	3.87693	3.90884	0.02993	0.98188	1.01181	—	4,189.64	4,189.64	0.21218	0.22909	0.33220	4,263.55
Area	3.79356	3.79356	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Energy	0.05489	0.02744	0.47134	0.21648	0.00299	0.03792	—	0.03792	0.03792	—	0.03792	—	1,261.96	1,261.96	0.13282	0.01083	—	1,268.51
Water	—	—	—	—	—	—	—	—	—	—	—	12.1505	26.7720	38.9225	1.24911	0.02999	—	79.0880
Waste	—	—	—	—	—	—	—	—	—	—	—	72.6137	0.00000	72.6137	7.25748	0.00000	—	254.051
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08336	1.08336

Stationa	0.72125	0.65634	1.83469	1.67375	0.00315	0.09656	0.00000	0.09656	0.09656	0.00000	0.09656	0.00000	335.806	335.806	0.01348	0.00263	0.00000	336.927
Total	7.64419	7.37382	4.78745	18.5913	0.04728	0.16640	3.87693	4.04332	0.16441	0.98188	1.14629	84.7642	5,814.18	5,898.94	8.86508	0.27255	1.41556	6,203.21
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.15262	2.98821	2.26975	17.4437	0.04125	0.03032	3.67406	3.70437	0.02843	0.93054	0.95897	—	4,200.15	4,200.15	0.18683	0.21293	5.25887	4,273.53
Area	4.15285	4.13337	0.03603	3.82200	0.00017	0.00191	—	0.00191	0.00144	—	0.00144	0.00000	10.3371	10.3371	0.00043	0.00009	—	10.3735
Energy	0.05489	0.02744	0.47134	0.21648	0.00299	0.03792	—	0.03792	0.03792	—	0.03792	—	1,261.96	1,261.96	0.13282	0.01083	—	1,268.51
Water	—	—	—	—	—	—	—	—	—	—	—	12.1505	26.7720	38.9225	1.24911	0.02999	—	79.0880
Waste	—	—	—	—	—	—	—	—	—	—	—	72.6137	0.00000	72.6137	7.25748	0.00000	—	254.051
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08336	1.08336
Stationa ry	0.09880	0.08991	0.25133	0.22928	0.00043	0.01323	0.00000	0.01323	0.01323	0.00000	0.01323	0.00000	46.0008	46.0008	0.00185	0.00036	0.00000	46.1543
Total	7.45916	7.23893	3.02844	21.7115	0.04484	0.08338	3.67406	3.75743	0.08102	0.93054	1.01156	84.7642	5,545.22	5,629.99	8.82852	0.25420	6.34223	5,932.79
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.57535	0.54535	0.41423	3.18348	0.00753	0.00553	0.67052	0.67605	0.00519	0.16982	0.17501	—	695.383	695.383	0.03093	0.03525	0.87067	707.532
Area	0.75789	0.75434	0.00658	0.69751	0.00003	0.00035	—	0.00035	0.00026	—	0.00026	0.00000	1.71142	1.71142	0.00007	0.00001	—	1.71745
Energy	0.01002	0.00501	0.08602	0.03951	0.00055	0.00692	—	0.00692	0.00692	—	0.00692	—	208.932	208.932	0.02199	0.00179	—	210.016
Water	—	—	—	—	—	—	—	—	—	—	—	2.01165	4.43242	6.44407	0.20680	0.00497	—	13.0939
Waste	—	—	—	—	—	—	—	—	—	—	—	12.0220	0.00000	12.0220	1.20156	0.00000	—	42.0610
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.17936	0.17936
Stationa ry	0.01803	0.01641	0.04587	0.04184	0.00008	0.00241	0.00000	0.00241	0.00241	0.00000	0.00241	0.00000	7.61595	7.61595	0.00031	0.00006	0.00000	7.64138
Total	1.36130	1.32111	0.55269	3.96234	0.00818	0.01522	0.67052	0.68573	0.01479	0.16982	0.18461	14.0337	918.075	932.109	1.46166	0.04209	1.05003	982.242

3. Construction Emissions Details

3.1. Demolition (2027)

3.1.1. Onsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.63907	2.21478	19.9005	18.6307	0.03253	0.79594	—	0.79594	0.73226	—	0.73226	—	3,426.90	3,426.90	0.13901	0.02780	—	3,438.66
Demolition	—	—	—	—	—	—	0.68724	0.68724	—	0.10407	0.10407	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14461	0.12136	1.09044	1.02086	0.00178	0.04361	—	0.04361	0.04012	—	0.04012	—	187.775	187.775	0.00762	0.00152	—	188.420
Demolition	—	—	—	—	—	—	0.03766	0.03766	—	0.00570	0.00570	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02639	0.02215	0.19901	0.18631	0.00033	0.00796	—	0.00796	0.00732	—	0.00732	—	31.0883	31.0883	0.00126	0.00025	—	31.1950
Demolition	—	—	—	—	—	—	0.00687	0.00687	—	0.00104	0.00104	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07126	0.06382	0.09111	0.82227	0.00000	0.00000	8.36073	8.36073	0.00000	0.86013	0.86013	—	188.263	188.263	0.00942	0.00744	0.01750	190.733
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.02347	0.01521	0.96007	0.22541	0.00560	0.01601	7.33917	7.35518	0.01601	0.77144	0.78745	—	786.995	786.995	0.00747	0.12644	0.04066	824.902
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00451	0.00410	0.00462	0.05716	0.00000	0.00000	0.45220	0.45220	0.00000	0.04654	0.04654	—	11.0883	11.0883	0.00048	0.00039	0.01601	11.2324
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00134	0.00088	0.05157	0.01219	0.00031	0.00088	0.39699	0.39786	0.00088	0.04175	0.04263	—	43.1028	43.1028	0.00041	0.00693	0.03708	45.2148
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00082	0.00075	0.00084	0.01043	0.00000	0.00000	0.08253	0.08253	0.00000	0.00849	0.00849	—	1.83580	1.83580	0.00008	0.00006	0.00265	1.85965
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00025	0.00016	0.00941	0.00222	0.00006	0.00016	0.07245	0.07261	0.00016	0.00762	0.00778	—	7.13616	7.13616	0.00007	0.00115	0.00614	7.48582

3.2. Site Preparation (2027)

3.2.1. Onsite - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.63178	3.05170	27.9724	28.2794	0.04891	1.17173	—	1.17173	1.07799	—	1.07799	—	5,297.82	5,297.82	0.21490	0.04298	—	5,316.00
Dust From Material Movement	—	—	—	—	—	—	9.82850	9.82850	—	5.05122	5.05122	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09950	0.08361	0.76637	0.77478	0.00134	0.03210	—	0.03210	0.02953	—	0.02953	—	145.146	145.146	0.00589	0.00118	—	145.644
Dust From Material Movement	—	—	—	—	—	—	0.26927	0.26927	—	0.13839	0.13839	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01816	0.01526	0.13986	0.14140	0.00024	0.00586	—	0.00586	0.00539	—	0.00539	—	24.0305	24.0305	0.00097	0.00019	—	24.1130
Dust From Material Movement	—	—	—	—	—	—	0.04914	0.04914	—	0.02526	0.02526	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08314	0.07446	0.10629	0.95931	0.00000	0.00000	9.75418	9.75418	0.00000	1.00349	1.00349	—	219.640	219.640	0.01100	0.00868	0.02041	222.522
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00263	0.00239	0.00270	0.03334	0.00000	0.00000	0.26379	0.26379	0.00000	0.02715	0.02715	—	6.46818	6.46818	0.00028	0.00023	0.00934	6.55224
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00048	0.00044	0.00049	0.00609	0.00000	0.00000	0.04814	0.04814	0.00000	0.00495	0.00495	—	1.07088	1.07088	0.00005	0.00004	0.00155	1.08480
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Grading (2027)

3.3.1. Onsite - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.88795	1.58640	14.2321	17.2743	0.02733	0.59767	—	0.59767	0.54986	—	0.54986	—	2,960.07	2,960.07	0.12007	0.02401	—	2,970.23
Dust From Material Movement	—	—	—	—	—	—	3.54129	3.54129	—	1.71237	1.71237	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10345	0.08693	0.77984	0.94654	0.00150	0.03275	—	0.03275	0.03013	—	0.03013	—	162.196	162.196	0.00658	0.00132	—	162.752
Dust From Material Movement	—	—	—	—	—	—	0.19404	0.19404	—	0.09383	0.09383	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01888	0.01586	0.14232	0.17274	0.00027	0.00598	—	0.00598	0.00550	—	0.00550	—	26.8534	26.8534	0.00109	0.00022	—	26.9455
Dust From Material Movement	—	—	—	—	—	—	0.03541	0.03541	—	0.01712	0.01712	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07126	0.06382	0.09111	0.82227	0.00000	0.00000	8.36073	8.36073	0.00000	0.86013	0.86013	—	188.263	188.263	0.00942	0.00744	0.01750	190.733
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00451	0.00410	0.00462	0.05716	0.00000	0.00000	0.45220	0.45220	0.00000	0.04654	0.04654	—	11.0883	11.0883	0.00048	0.00039	0.01601	11.2324
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00082	0.00075	0.00084	0.01043	0.00000	0.00000	0.08253	0.08253	0.00000	0.00849	0.00849	—	1.83580	1.83580	0.00008	0.00006	0.00265	1.85965
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Building Construction (2027)

3.4.1. Onsite - Unmitigated

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

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

Off-Road Equipment	1.23076	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23076	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69606	0.58246	5.31111	7.31716	0.01323	0.19035	—	0.19035	0.17512	—	0.17512	—	1,355.69	1,355.69	0.05499	0.01100	—	1,360.34
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12703	0.10630	0.96928	1.33538	0.00241	0.03474	—	0.03474	0.03196	—	0.03196	—	224.449	224.449	0.00910	0.00182	—	225.220
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

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

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

Worker	0.61544	0.56917	0.51323	9.56514	0.00000	0.00000	54.4049	54.4049	0.00000	5.59707	5.59707	—	1,449.00	1,449.00	0.05703	0.04842	4.40055	1,469.26
Vendor	0.02490	0.01890	0.47722	0.20927	0.00369	0.00672	4.61107	4.61778	0.00672	0.48238	0.48910	—	451.909	451.909	0.00566	0.06343	1.00880	471.962
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46373	0.41531	0.59285	5.35067	0.00000	0.00000	54.4049	54.4049	0.00000	5.59707	5.59707	—	1,225.06	1,225.06	0.06133	0.04842	0.11386	1,241.14
Vendor	0.01890	0.01660	0.52405	0.21414	0.00369	0.00672	4.61107	4.61778	0.00672	0.48238	0.48910	—	452.301	452.301	0.00566	0.06376	0.02618	471.469
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30304	0.27565	0.31034	3.83908	0.00000	0.00000	30.3716	30.3716	0.00000	3.12547	3.12547	—	744.730	744.730	0.03225	0.02617	1.07535	754.409
Vendor	0.01315	0.00995	0.29113	0.12003	0.00209	0.00380	2.57428	2.57808	0.00380	0.26944	0.27324	—	255.674	255.674	0.00320	0.03587	0.24642	266.691
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05530	0.05031	0.05664	0.70063	0.00000	0.00000	5.54282	5.54282	0.00000	0.57040	0.57040	—	123.299	123.299	0.00534	0.00433	0.17804	124.901
Vendor	0.00240	0.00182	0.05313	0.02191	0.00038	0.00069	0.46981	0.47050	0.00069	0.04917	0.04987	—	42.3297	42.3297	0.00053	0.00594	0.04080	44.1537
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Building Construction (2028)

3.5.1. Onsite - Unmitigated

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

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

Off-Road	1.18481	0.99143	8.92495	12.9352	0.02340	0.30024	—	0.30024	0.27622	—	0.27622	—	2,397.46	2,397.46	0.09725	0.01945	—	2,405.68
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07883	0.06597	0.59383	0.86066	0.00156	0.01998	—	0.01998	0.01838	—	0.01838	—	159.518	159.518	0.00647	0.00129	—	160.065
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01439	0.01204	0.10837	0.15707	0.00028	0.00365	—	0.00365	0.00335	—	0.00335	—	26.4100	26.4100	0.00107	0.00021	—	26.5006
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44436	0.39595	0.54873	4.96548	0.00000	0.00000	54.4049	54.4049	0.00000	5.59707	5.59707	—	1,202.29	1,202.29	0.01937	0.04842	0.10361	1,217.31
Vendor	0.01825	0.01258	0.50159	0.20176	0.00369	0.00672	4.61107	4.61778	0.00672	0.48238	0.48910	—	440.910	440.910	0.00534	0.06007	0.02248	458.967
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03157	0.02849	0.03358	0.41880	0.00000	0.00000	3.57313	3.57313	0.00000	0.36770	0.36770	—	85.9773	85.9773	0.00379	0.00308	0.11477	87.1043
Vendor	0.00130	0.00092	0.03278	0.01310	0.00022	0.00045	0.30286	0.30330	0.00045	0.03170	0.03215	—	29.3208	29.3208	0.00035	0.00400	0.02487	30.5456
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00576	0.00520	0.00613	0.07643	0.00000	0.00000	0.65210	0.65210	0.00000	0.06711	0.06711	—	14.2345	14.2345	0.00063	0.00051	0.01900	14.4211
Vendor	0.00024	0.00017	0.00598	0.00239	0.00004	0.00008	0.05527	0.05535	0.00008	0.00579	0.00587	—	4.85439	4.85439	0.00006	0.00066	0.00412	5.05718
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6. Paving (2028)

3.6.1. Onsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81550	0.68524	6.62754	9.90989	0.01395	0.25554	—	0.25554	0.23510	—	0.23510	—	1,511.03	1,511.03	0.06129	0.01226	—	1,516.22
Paving	0.45326	0.45326	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04468	0.03755	0.36315	0.54301	0.00076	0.01400	—	0.01400	0.01288	—	0.01288	—	82.7962	82.7962	0.00336	0.00067	—	83.0803
Paving	0.02484	0.02484	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00815	0.00685	0.06628	0.09910	0.00014	0.00256	—	0.00256	0.00235	—	0.00235	—	13.7079	13.7079	0.00056	0.00011	—	13.7549
Paving	0.00453	0.00453	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.2. Offsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06829	0.06085	0.08433	0.76307	0.00000	0.00000	8.36073	8.36073	0.00000	0.86013	0.86013	—	184.764	184.764	0.00298	0.00744	0.01592	187.071
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00400	0.00361	0.00425	0.05300	0.00000	0.00000	0.45220	0.45220	0.00000	0.04654	0.04654	—	10.8810	10.8810	0.00048	0.00039	0.01452	11.0236
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00073	0.00066	0.00078	0.00967	0.00000	0.00000	0.08253	0.08253	0.00000	0.00849	0.00849	—	1.80147	1.80147	0.00008	0.00006	0.00240	1.82509
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.7. Architectural Coating (2027)

3.7.1. Onsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13715	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	41.6920	41.6920	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00805	0.00665	0.04880	0.06607	0.00010	0.00112	—	0.00112	0.00103	—	0.00103	—	7.83832	7.83832	0.00032	0.00006	—	7.86522
Architectural Coatings	2.44767	2.44767	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.00147	0.00121	0.00891	0.01206	0.00002	0.00020	—	0.00020	0.00019	—	0.00019	—	1.29772	1.29772	0.00005	0.00001	—	1.30218
Architectural Coatings	0.44670	0.44670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.7.2. Offsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09275	0.08306	0.11857	1.07013	0.00000	0.00000	10.8810	10.8810	0.00000	1.11941	1.11941	—	245.013	245.013	0.01227	0.00968	0.02277	248.228
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00629	0.00572	0.00644	0.07970	0.00000	0.00000	0.63055	0.63055	0.00000	0.06489	0.06489	—	15.4615	15.4615	0.00067	0.00054	0.02233	15.6625
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00115	0.00104	0.00118	0.01455	0.00000	0.00000	0.11508	0.11508	0.00000	0.01184	0.01184	—	2.55983	2.55983	0.00011	0.00009	0.00370	2.59310
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.8. Architectural Coating (2028)

3.8.1. Onsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12985	0.10731	0.80814	1.11833	0.00173	0.01536	—	0.01536	0.01413	—	0.01413	—	133.517	133.517	0.00542	0.00108	—	133.975
Architectural Coatings	41.6920	41.6920	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00864	0.00714	0.05377	0.07441	0.00011	0.00102	—	0.00102	0.00094	—	0.00094	—	8.88372	8.88372	0.00036	0.00007	—	8.91420
Architectural Coatings	2.77403	2.77403	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.00158	0.00130	0.00981	0.01358	0.00002	0.00019	—	0.00019	0.00017	—	0.00017	—	1.47080	1.47080	0.00006	0.00001	—	1.47585
Architectural Coatings	0.50626	0.50626	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.8.2. Offsite - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08887	0.07919	0.10975	0.99310	0.00000	0.00000	10.8810	10.8810	0.00000	1.11941	1.11941	—	240.459	240.459	0.00387	0.00968	0.02072	243.462
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00631	0.00570	0.00672	0.08376	0.00000	0.00000	0.71463	0.71463	0.00000	0.07354	0.07354	—	17.1955	17.1955	0.00076	0.00062	0.02295	17.4209
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00115	0.00104	0.00123	0.01529	0.00000	0.00000	0.13042	0.13042	0.00000	0.01342	0.01342	—	2.84690	2.84690	0.00013	0.00010	0.00380	2.88422
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	3.91332	3.73890	2.24416	22.9805	0.04666	0.03187	3.87693	3.90880	0.02989	0.98188	1.01177	—	4,749.33	4,749.33	0.19187	0.22127	12.8119	4,832.88
Recreational Swimming Pool	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Health Club	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	3.91332	3.73890	2.24416	22.9805	0.04666	0.03187	3.87693	3.90880	0.02989	0.98188	1.01177	—	4,749.33	4,749.33	0.19187	0.22127	12.8119	4,832.88
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	3.07449	2.89648	2.48142	16.7010	0.04113	0.03191	3.87693	3.90884	0.02993	0.98188	1.01181	—	4,189.64	4,189.64	0.21218	0.22909	0.33220	4,263.55
Recreational Swimming Pool	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Health Club	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Total	3.07449	2.89648	2.48142	16.7010	0.04113	0.03191	3.87693	3.90884	0.02993	0.98188	1.01181	—	4,189.64	4,189.64	0.21218	0.22909	0.33220	4,263.55
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.57535	0.54535	0.41423	3.18348	0.00753	0.00553	0.67052	0.67605	0.00519	0.16982	0.17501	—	695.383	695.383	0.03093	0.03525	0.87067	707.532
Recreational Swimming Pool	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Health Club	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.57535	0.54535	0.41423	3.18348	0.00753	0.00553	0.67052	0.67605	0.00519	0.16982	0.17501	—	695.383	695.383	0.03093	0.03525	0.87067	707.532

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	566.085	566.085	0.06805	0.00825	—	570.244
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	100.517	100.517	0.01208	0.00146	—	101.255
Total	—	—	—	—	—	—	—	—	—	—	—	—	666.602	666.602	0.08013	0.00971	—	671.500

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	566.085	566.085	0.06805	0.00825	—	570.244
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	100.517	100.517	0.01208	0.00146	—	101.255
Total	—	—	—	—	—	—	—	—	—	—	—	—	666.602	666.602	0.08013	0.00971	—	671.500
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	93.7218	93.7218	0.01127	0.00137	—	94.4105
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	16.6417	16.6417	0.00200	0.00024	—	16.7640
Total	—	—	—	—	—	—	—	—	—	—	—	—	110.364	110.364	0.01327	0.00161	—	111.174

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

Apartments Mid Rise	0.05066	0.02533	0.43295	0.18423	0.00276	0.03500	—	0.03500	0.03500	—	0.03500	—	549.550	549.550	0.04863	0.00103	—	551.075
Recreational Swimming Pool	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Health Club	0.00422	0.00211	0.03839	0.03225	0.00023	0.00292	—	0.00292	0.00292	—	0.00292	—	45.8077	45.8077	0.00405	0.00009	—	45.9347
Total	0.05489	0.02744	0.47134	0.21648	0.00299	0.03792	—	0.03792	0.03792	—	0.03792	—	595.358	595.358	0.05269	0.00112	—	597.009
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.05066	0.02533	0.43295	0.18423	0.00276	0.03500	—	0.03500	0.03500	—	0.03500	—	549.550	549.550	0.04863	0.00103	—	551.075
Recreational Swimming Pool	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Health Club	0.00422	0.00211	0.03839	0.03225	0.00023	0.00292	—	0.00292	0.00292	—	0.00292	—	45.8077	45.8077	0.00405	0.00009	—	45.9347
Total	0.05489	0.02744	0.47134	0.21648	0.00299	0.03792	—	0.03792	0.03792	—	0.03792	—	595.358	595.358	0.05269	0.00112	—	597.009
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00925	0.00462	0.07901	0.03362	0.00050	0.00639	—	0.00639	0.00639	—	0.00639	—	90.9843	90.9843	0.00805	0.00017	—	91.2367
Recreational Swimming Pool	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Health Club	0.00077	0.00039	0.00701	0.00589	0.00004	0.00053	—	0.00053	0.00053	—	0.00053	—	7.58399	7.58399	0.00067	0.00001	—	7.60502
Total	0.01002	0.00501	0.08602	0.03951	0.00055	0.00692	—	0.00692	0.00692	—	0.00692	—	98.5683	98.5683	0.00872	0.00019	—	98.8417

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Consumer Products	3.26812	3.26812	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.52543	0.52543	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.72856	0.68907	0.07306	7.75017	0.00034	0.00387	—	0.00387	0.00292	—	0.00292	—	20.9613	20.9613	0.00088	0.00017	—	21.0351
Total	4.52212	4.48263	0.07306	7.75017	0.00034	0.00387	—	0.00387	0.00292	—	0.00292	0.00000	20.9613	20.9613	0.00088	0.00017	—	21.0351
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Consumer Products	3.26812	3.26812	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.52543	0.52543	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	3.79356	3.79356	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Consumer Products	0.59643	0.59643	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.09589	0.09589	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06557	0.06202	0.00658	0.69751	0.00003	0.00035	—	0.00035	0.00026	—	0.00026	—	1.71142	1.71142	0.00007	0.00001	—	1.71745
Total	0.75789	0.75434	0.00658	0.69751	0.00003	0.00035	—	0.00035	0.00026	—	0.00026	0.00000	1.71142	1.71142	0.00007	0.00001	—	1.71745

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	11.4252	25.4233	36.8485	1.17458	0.02821	—	74.6181
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.22666	0.42148	0.64814	0.02329	0.00056	—	1.39685
Health Club	—	—	—	—	—	—	—	—	—	—	—	0.49866	0.92725	1.42591	0.05124	0.00123	—	3.07306

Total	—	—	—	—	—	—	—	—	—	—	—	12.1505	26.7720	38.9225	1.24911	0.02999	—	79.0880
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	11.4252	25.4233	36.8485	1.17458	0.02821	—	74.6181
Recreati onal Swimmi ng Pool	—	—	—	—	—	—	—	—	—	—	—	0.22666	0.42148	0.64814	0.02329	0.00056	—	1.39685
Health Club	—	—	—	—	—	—	—	—	—	—	—	0.49866	0.92725	1.42591	0.05124	0.00123	—	3.07306
Total	—	—	—	—	—	—	—	—	—	—	—	12.1505	26.7720	38.9225	1.24911	0.02999	—	79.0880
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1.89157	4.20912	6.10069	0.19446	0.00467	—	12.3539
Recreati onal Swimmi ng Pool	—	—	—	—	—	—	—	—	—	—	—	0.03753	0.06978	0.10731	0.00386	0.00009	—	0.23126
Health Club	—	—	—	—	—	—	—	—	—	—	—	0.08256	0.15352	0.23608	0.00848	0.00020	—	0.50878
Total	—	—	—	—	—	—	—	—	—	—	—	2.01165	4.43242	6.44407	0.20680	0.00497	—	13.0939

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	52.9532	0.00000	52.9532	5.29248	0.00000	—	185.265
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	6.14390	0.00000	6.14390	0.61406	0.00000	—	21.4954
Health Club	—	—	—	—	—	—	—	—	—	—	—	13.5166	0.00000	13.5166	1.35093	0.00000	—	47.2899
Total	—	—	—	—	—	—	—	—	—	—	—	72.6137	0.00000	72.6137	7.25748	0.00000	—	254.051
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	52.9532	0.00000	52.9532	5.29248	0.00000	—	185.265
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	6.14390	0.00000	6.14390	0.61406	0.00000	—	21.4954
Health Club	—	—	—	—	—	—	—	—	—	—	—	13.5166	0.00000	13.5166	1.35093	0.00000	—	47.2899
Total	—	—	—	—	—	—	—	—	—	—	—	72.6137	0.00000	72.6137	7.25748	0.00000	—	254.051
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	8.76700	0.00000	8.76700	0.87623	0.00000	—	30.6728
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	1.01719	0.00000	1.01719	0.10166	0.00000	—	3.55881

Health Club	—	—	—	—	—	—	—	—	—	—	—	2.23782	0.00000	2.23782	0.22366	0.00000	—	7.82939
Total	—	—	—	—	—	—	—	—	—	—	—	12.0220	0.00000	12.0220	1.20156	0.00000	—	42.0610

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.06224	1.06224
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02112	0.02112
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08336	1.08336
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.06224	1.06224
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000

Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02112	0.02112
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08336	1.08336
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.17587	0.17587
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00350	0.00350
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.17936	0.17936

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipm ent Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergen cy Generat or	0.72125	0.65634	1.83469	1.67375	0.00315	0.09656	0.00000	0.09656	0.09656	0.00000	0.09656	0.00000	335.806	335.806	0.01348	0.00263	0.00000	336.927
Total	0.72125	0.65634	1.83469	1.67375	0.00315	0.09656	0.00000	0.09656	0.09656	0.00000	0.09656	0.00000	335.806	335.806	0.01348	0.00263	0.00000	336.927
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergen cy Generat or	0.72125	0.65634	1.83469	1.67375	0.00315	0.09656	0.00000	0.09656	0.09656	0.00000	0.09656	0.00000	335.806	335.806	0.01348	0.00263	0.00000	336.927
Total	0.72125	0.65634	1.83469	1.67375	0.00315	0.09656	0.00000	0.09656	0.09656	0.00000	0.09656	0.00000	335.806	335.806	0.01348	0.00263	0.00000	336.927
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergen cy Generat or	0.01803	0.01641	0.04587	0.04184	0.00008	0.00241	0.00000	0.00241	0.00241	0.00000	0.00241	0.00000	7.61595	7.61595	0.00031	0.00006	0.00000	7.64138
Total	0.01803	0.01641	0.04587	0.04184	0.00008	0.00241	0.00000	0.00241	0.00241	0.00000	0.00241	0.00000	7.61595	7.61595	0.00031	0.00006	0.00000	7.64138

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)

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/4/2027	2/1/2027	5.00000	20.0000	—
Site Preparation	Site Preparation	2/2/2027	2/16/2027	5.00000	10.00000	—
Grading	Grading	2/17/2027	3/17/2027	5.00000	20.0000	—
Building Construction	Building Construction	3/18/2027	2/3/2028	5.00000	230.000	—
Paving	Paving	2/4/2028	3/3/2028	5.00000	20.0000	—
Architectural Coating	Architectural Coating	12/2/2027	2/3/2028	5.00000	46.0000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.000000	8.00000	33.0000	0.73000
Demolition	Excavators	Diesel	Average	3.00000	8.00000	36.0000	0.38000
Demolition	Rubber Tired Dozers	Diesel	Average	2.00000	8.00000	367.000	0.40000
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	1.000000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/Back hoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2000	HHDT,MHDT
Demolition	Hauling	12.1000	20.0000	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	—	10.2000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	97.6080	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	14.9389	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	—	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	19.5216	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

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	300,340	100,113	6,600.00	2,200.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00000	0.00000	0.00000	21,000.0	0.00000
Site Preparation	—	—	15.0000	0.00000	0.00000
Grading	—	—	20.0000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	3.46000

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	50%	50%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	Apartments Mid Rise	3.46000	100%
Paving	Recreational Swimming Pool	0.00000	0%
Paving	Health Club	0.00000	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	456.543	0.03300	0.00400
2028	0.00000	456.543	0.03300	0.00400

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VM/Weekday	VM/Saturday	VM/Sunday	VM/Year
Apartments Mid Rise	931.000	840.560	699.580	323,032	5,503.70	4,969.05	4,135.64	1,909,637
Recreational Swimming Pool	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Health Club	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Apartments Mid Rise	Wood Fireplaces	0	0
Apartments Mid Rise	Gas Fireplaces	0	0

Apartments Mid Rise	Propane Fireplaces	0	0
Apartments Mid Rise	Electric Fireplaces	0	0
Apartments Mid Rise	No Fireplaces	133	133
Apartments Mid Rise	Conventional Wood Stoves	0	0
Apartments Mid Rise	Catalytic Wood Stoves	0	0
Apartments Mid Rise	Non-Catalytic Wood Stoves	0	0
Apartments Mid Rise	Pellet Wood Stoves	0	0
Recreational Swimming Pool	Wood Fireplaces	0	0
Recreational Swimming Pool	Gas Fireplaces	0	0
Recreational Swimming Pool	Propane Fireplaces	0	0
Recreational Swimming Pool	Electric Fireplaces	0	0
Recreational Swimming Pool	No Fireplaces	0	0
Recreational Swimming Pool	Conventional Wood Stoves	0	0
Recreational Swimming Pool	Catalytic Wood Stoves	0	0
Recreational Swimming Pool	Non-Catalytic Wood Stoves	0	0
Recreational Swimming Pool	Pellet Wood Stoves	0	0
Health Club	Wood Fireplaces	0	0
Health Club	Gas Fireplaces	0	0
Health Club	Propane Fireplaces	0	0
Health Club	Electric Fireplaces	0	0
Health Club	No Fireplaces	0	0
Health Club	Conventional Wood Stoves	0	0
Health Club	Catalytic Wood Stoves	0	0
Health Club	Non-Catalytic Wood Stoves	0	0
Health Club	Pellet Wood Stoves	0	0

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)
300,340	100,113	6,600.00	2,200.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	180.000

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	752,668	274.518	0.0330	0.0040	1,714,744
Recreational Swimming Pool	0.00000	274.518	0.0330	0.0040	0.00000
Health Club	133,647	274.518	0.0330	0.0040	142,932

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	5,962,297	1,726,294
Recreational Swimming Pool	118,286	0.00000
Health Club	260,230	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	98.2545	0.00000
Recreational Swimming Pool	11.4000	0.00000
Health Club	25.0800	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	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	2,088.00	0.00225	2.50000	2.50000	10.00000
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
Recreational Swimming Pool	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Recreational Swimming Pool	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000
Health Club	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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
Emergency Generator	Diesel	1.000000	1.000000	50.0000	400.000	0.73000

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

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

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	32.0100	annual days of extreme heat
Extreme Precipitation	0.15000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00000	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	4	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

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	4	1	1	4
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	32.1469
AQ-PM	39.1910

AQ-DPM	24.1568
Drinking Water	54.9894
Lead Risk Housing	39.9370
Pesticides	79.5172
Toxic Releases	11.5029
Traffic	35.1000
Effect Indicators	—
CleanUp Sites	70.1754
Groundwater	70.2972
Haz Waste Facilities/Generators	46.3534
Impaired Water Bodies	99.5170
Solid Waste	35.7159
Sensitive Population	—
Asthma	97.7443
Cardio-vascular	87.4128
Low Birth Weights	51.8219
Socioeconomic Factor Indicators	—
Education	77.7272
Housing	56.8568
Linguistic	90.4859
Poverty	91.3191
Unemployment	98.2952

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	36.85358655

Employed	8.27665854
Median HI	25.47157706
Education	—
Bachelor's or higher	19.41485949
High school enrollment	100
Preschool enrollment	38.23944566
Transportation	—
Auto Access	25.58706532
Active commuting	20.90337482
Social	—
2-parent households	24.89413576
Voting	52.31618119
Neighborhood	—
Alcohol availability	45.38688567
Park access	52.66264596
Retail density	52.53432568
Supermarket access	50.94315411
Tree canopy	18.00333633
Housing	—
Homeownership	47.94045939
Housing habitability	54.53612216
Low-inc homeowner severe housing cost burden	39.61247273
Low-inc renter severe housing cost burden	41.75542153
Uncrowded housing	58.11625818
Health Outcomes	—
Insured adults	30.39907609
Arthritis	0.0
Asthma ER Admissions	1.7

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	47.8
Cognitively Disabled	15.9
Physically Disabled	7.5
Heart Attack ER Admissions	17.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	42.4
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	68.4
Elderly	53.8
English Speaking	28.5
Foreign-born	54.9
Outdoor Workers	19.4

Climate Change Adaptive Capacity	—
Impervious Surface Cover	57.7
Traffic Density	25.2
Traffic Access	23.0
Other Indices	—
Hardship	74.8
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	87.0000
Healthy Places Index Score for Project Location (b)	26.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	133 units 8.11 acres (7.87 acres on-site + 0.24 acre off-site) 143,916 sf residential buildings 4,400 sf clubhouse with ~2,000 sf swimming pool 20% landscaping modeled (~69,000 sf)
Construction: Construction Phases	Architectural coatings simultaneous with last 20% of building construction
Construction: On-Road Fugitive Dust	Construction vehicles would access via paved roads, with the portion of W River Road experiencing higher levels of entrained roadway dust. To account for these dust emissions, 98 percent paved roads were modeled.
Construction: Paving	3.46 acres paved
Operations: Vehicle Data	LMA - 931 weekday trips (7.00 trips per unit) Weekend trip rates adjusted proportionately
Operations: Road Dust	All roads paved
Operations: Hearths	No fireplaces or wood stoves

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	3.50000	7.96000
Building Area	sq. ft	127,680	148,316
Landscape Area	sq. ft	—	69,000.0
Lot Area	acre	0.04591	0.05000
Building Area	sq. ft	2,000.00	0.00000
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	0.10101	0.10000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Architectural Coating	Architectural Coating	Start Date	3/4/2028	12/2/2027
Architectural Coating	Architectural Coating	End Date	4/1/2028	2/3/2028
Architectural Coating	Architectural Coating	Work Days per Phase	20.0000	46.0000

8.4.7. On-Road Fugitive Dust

Phase Name	Model Parameter	Units	Default Value	New Value
Demolition	Worker Trip Paved	%	50.0000	98.0000
Demolition	Vendor Trip Paved	%	50.0000	98.0000
Demolition	Hauling Trip Paved	%	50.0000	98.0000
Site Preparation	Worker Trip Paved	%	50.0000	98.0000
Site Preparation	Vendor Trip Paved	%	50.0000	98.0000
Site Preparation	Hauling Trip Paved	%	50.0000	98.0000
Grading	Worker Trip Paved	%	50.0000	98.0000
Grading	Vendor Trip Paved	%	50.0000	98.0000
Grading	Hauling Trip Paved	%	50.0000	98.0000
Building Construction	Worker Trip Paved	%	50.0000	98.0000
Building Construction	Vendor Trip Paved	%	50.0000	98.0000
Building Construction	Hauling Trip Paved	%	50.0000	98.0000
Paving	Worker Trip Paved	%	50.0000	98.0000
Paving	Vendor Trip Paved	%	50.0000	98.0000
Paving	Hauling Trip Paved	%	50.0000	98.0000
Architectural Coating	Worker Trip Paved	%	50.0000	98.0000
Architectural Coating	Vendor Trip Paved	%	50.0000	98.0000
Architectural Coating	Hauling Trip Paved	%	50.0000	98.0000

8.4.9. Paving

Phase Name	Land Use	Model Parameter	Units	Default Value	New Value
Paving	Apartments Mid Rise	Area Paved	acres	—	3.46000
Paving	Apartments Mid Rise	% Asphalt	%	0.00000	100.0000

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
Apartments Mid Rise	Weekday Trip Rate	size/day	5.44000	7.00000
Apartments Mid Rise	Saturday Trip Rate	size/day	4.91000	6.32000
Apartments Mid Rise	Sunday Trip Rate	size/day	4.09000	5.26000
Recreational Swimming Pool	Weekday Trip Rate	size/day	28.8200	0.00000
Recreational Swimming Pool	Saturday Trip Rate	size/day	9.10000	0.00000
Recreational Swimming Pool	Sunday Trip Rate	size/day	13.6000	0.00000
Health Club	Weekday Trip Rate	size/day	32.9300	0.00000
Health Club	Saturday Trip Rate	size/day	20.8700	0.00000
Health Club	Sunday Trip Rate	size/day	26.7300	0.00000

8.5.1.4. Road Dust

Model Parameter	Units	Default Value	New Value
% Paved	%	50.0000	100.0000

8.5.2. Area Sources

8.5.2.1. Hearths

Land Use	Model Parameter	Units	Default Value	New Value
Apartments Mid Rise	Gas Fireplaces	—	73	0
Apartments Mid Rise	No Fireplaces	—	60	133
Apartments Mid Rise	Hours/Day	—	3	0
Apartments Mid Rise	Days/Year	—	4	0
Apartments Mid Rise	Wood Mass	lb/year	2,080	0

ATTACHMENT 2

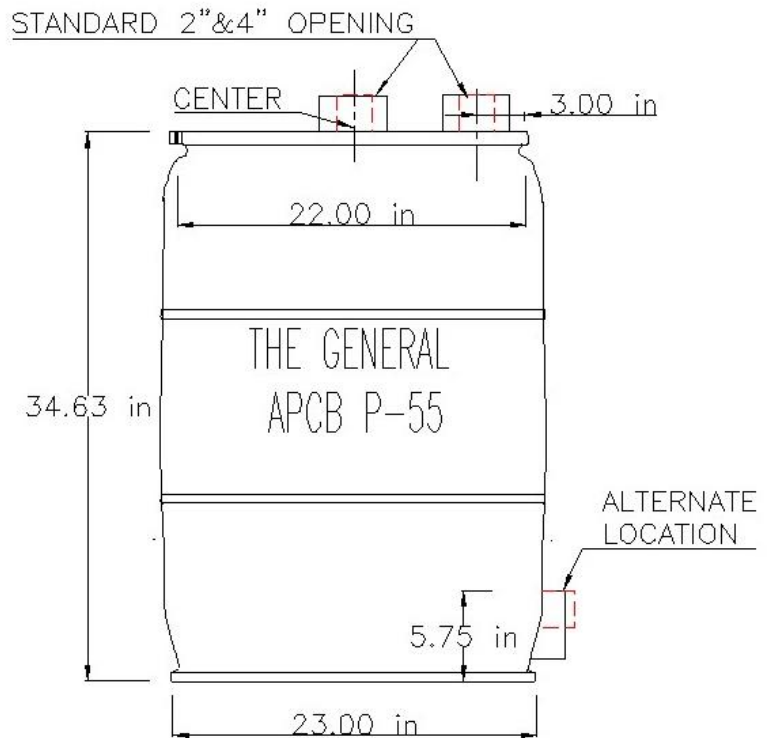
Sample Odor Control System Specifications



THE GENERAL-55P

HDPE air pollution control barrels

THE GENERAL AIR POLLUTION CONTROL BARREL – 55P is the same as our steel drums except that it is made from HDPE for corrosion resistance. It is ready to use when delivered and provides a low cost, self-contained air purification filter. We make the drum with 2" and 4" connections in different locations, so you will have to let us know the size and location and type of connections you require when you place your order. The 2" model flows up to 100 cfm and the 4" model flows up to 165 cfm.



<u>SPECIFICATIONS</u>	<u>55P-2</u>	<u>55P-4</u>
A – Diameter, Outside	23"	23"
B – Height, Outside	35"	35"
Inlet Fitting	2" PIPE	4" PIPE
Outlet Fitting	2" PIPE	4" PIPE
Drain Fitting	1" OPTIONAL	1" OPTIONAL
Carbon Weight, lbs.	150	150
Max. Flow Rate, cfm	100	165
Maximum Pressure, psig	5 - 7	5 - 7
Max. Temp., Deg F	110	110
Flow Direction	Up/Down	Up/Down

Activated Carbon - The General vapor adsorbers are filled with virgin, high activity, activated carbon. Any of virgin coal, coconut shell, reactivated or impregnated carbons are available as well.

Removable Lid - HDPE lid with lever lock closure and poly-clad cellulose gasket.

Connections - Connections with straight 2" or 4" HDPE pipe to connect to using a sleeve and clamp connector to insure easy, durable and leak proof hookup to your system. Optional drains let you remove any accumulated condensate.

Flow Distributors - The 55 gallon barrel uses an air plenum chamber to insure even distribution of the airflow through the carbon.

Installation & Start Up - The General air pollution control barrel requires no special procedure for start up. Just connect the inlet and outlet to the treatment system and start it up. Multiple units are usually connected in series with testing advised between the units to determine when the first unit needs to be changed out.

Maintenance - Once connected, The General requires no maintenance other than the monitoring of the influent and effluent air streams and the operating pressure of the system. Monitoring the air stream into the last Air Pollution Control Barrel in series mode is a recommended safeguard against breakthrough in the final discharge. When the concentration of contaminants in the outflow equals the concentration in the inflow, The General has reached its removal capacity and should be removed from service. The working life of each adsorber is dependent upon the type of contaminant in the air as well as its concentration and the airflow rate. A pressure relief device is advised to prevent damage to the canister in the event of excessive pressure buildup.

Recharging The General - Once the carbon has reached its pollutant removal capacity, the unit should be removed and replaced with a fresh one. To purchase replacement carbon or to arrange for a carbon change out, please contact our office.

Disposal - Dispose of the spent carbon in accordance with Federal, State and Local regulations.

Caution!

Wet activated carbon removes oxygen from air causing a severe hazard to workers inside carbon vessels. Confined space / low oxygen procedures should be put in place before any entry is made. Such procedures should comply with all applicable local, state and federal guidelines.