Greenhouse Gas Analysis for the Temescal Commercial Project Riverside County, California

Prepared for
MCP Industries LLC
23835 Temescal Canyon Road
Corona, CA 92883
Contact: Mark Freed

Prepared by
RECON Environmental, Inc.
3111 Camino del Rio North, Suite 600
San Diego, CA 92108
P 619.308.9333

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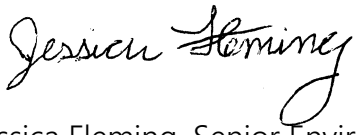

Jessica Fleming, Senior Environmental Specialist
Noise, Air Quality, and Greenhouse Gas

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Acronyms and Abbreviations

2017 Scoping Plan	*2017 Climate Change Scoping Plan Update, the Strategy for Achieving California's 2030 Greenhouse Gas Target*
2022 Scoping Plan	*2022 Scoping Plan Update for Achieving Carbon Neutrality*
AB	Assembly Bill
BAU	business as usual
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
CO_2	carbon dioxide
County	County of Riverside
EO	Executive Order
GHG	greenhouse gas
GWP	global warming potential
I-15	Interstate 15
IPCC	Intergovernmental Panel on Climate Change
MMT CO_2E	million metric tons carbon dioxide equivalent
MPO	Metropolitan Planning Organizations
MT CO_2E	metric tons of carbon dioxide equivalent
N_2O	nitrous oxide
project	Temescal Commercial Project
RPS	Renewables Portfolio Standard
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
Scoping Plan	*Climate Change Scoping Plan: A Framework for Change*
U.S. EPA	U.S. Environmental Protection Agency

Executive Summary

The Temescal Commercial Project (project) is located at 23835 Temescal Canyon Road in unincorporated Riverside County, California. The project site is located west of Interstate 15 (I-15) freeway, and is bounded by Temescal Canyon Road to the east and Lawson Road to the west. The project proposes the construction of a 188,000-square-foot building on one parcel and three sheet-graded parcels fronting on Temescal Canyon Road for future retail/restaurant ground lease building pads. The new proposed building would include a clay-related commercial business and museum. The operations of the business would be enclosed inside of the new building with limited exterior yard use in screened and secured areas. The future retail/restaurant uses would include a 2,500-square-foot coffee shop with drive-through, a 2,900-square-foot fast casual restaurant, and a 5,000-square-foot fast food restaurant with drive-through.

This analysis evaluates the significance of potential greenhouse gas (GHG) emissions impacts that may be generated by the project in accordance with the California Environmental Quality Act (CEQA) and guidance from the County's of Riverside (County) and the South Coast Air Quality Management District (SCAQMD). This report evaluates the significance of potential impacts in terms of (1) the project's contribution of GHGs to cumulative statewide emissions and (2) whether the project would conflict with local and/or state regulations, plans, and policies adopted to reduce GHG emissions.

The County's Climate Action Plan (CAP) is a qualified GHG reduction plan that addresses the Senate Bill 32 target of reducing GHG emissions 40 percent below 1990 levels by 2030 and Executive Order S-3-15 target of reducing GHG emissions 80 percent below 1990 levels by 2050. The CAP Update identifies a two-step approach in evaluating GHG emissions. First, a screening threshold of 3,000 metric tons of carbon dioxide (MT CO_2E) per year is used to determine if additional analysis is required. Projects that exceed 3,000 MT CO_2E per year will be required to utilize the Screening Tables or prepare a project-specific technical analysis to quantify and mitigate project emissions. Projects that garner at least 100 points from the Screening Tables are determined to be consistent with the reduction quantities anticipated in the CAP Update. As calculated in this analysis, the project would exceed the 3,000 MT CO_2E per year screening threshold. Therefore, the project is required to demonstrate compliance with the County's CAP Screening Tables and achieve a minimum 100 points as identified in the CAP. The project would achieve 100 points through Reduction Measure R2-T4: Electrify the Fleet. The project would implement measure T4.B.1: Electric Vehicle Recharging by providing 38 parking spaces in two areas with circuit and capacity in parking areas for installation of vehicle charging stations (2 points per area for 4 points) and installing 12 electric vehicle charging stations (8 points per station for 96 points). The project would be consistent with the CAP's requirement to achieve at least 100 points and thus the project is considered to have a less than significant individual and cumulatively considerable impact on GHG emissions. The County shall verify incorporation of the identified Screening Table Measures within the project building plans and site designs prior to the issuance of building permit(s) and/or site plans (as applicable). The County shall verify implementation of the identified Screening Table Measures prior to the issuance of Certificate(s) of Occupancy. With achievement of 100 points per the CAP Screening Tables, the project would have a less than significant impact GHG impact.

Additionally, the project would be consistent with applicable Scoping Plan and Connect SoCal measures and is in line with the GHG reductions needed to achieve the 2050 GHG emission reduction targets identified by EO S-3-05. Furthermore, the project would be consistent with the County's CAP. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs, and impacts would be less than significant.

1.0 Introduction

This report evaluates the significance of potential impacts associated with greenhouse gas emissions that would be generated during construction and operation of the Temescal Commercial Project (project).

1.1 Understanding Global Climate Change

To evaluate the incremental effect of the project on statewide greenhouse gas (GHG) emissions and global climate change, it is important to have a basic understanding of the nature of the global climate change problem. Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. The earth's climate is in a state of constant flux with periodic warming and cooling cycles. Extreme periods of cooling are termed "ice ages," which may then be followed by extended periods of warmth. For most of the earth's geologic history, these periods of warming and cooling have been the result of many complicated interacting natural factors that include volcanic eruptions that spew gases and particles (dust) into the atmosphere; the amount of water, vegetation, and ice covering the earth's surface; subtle changes in the earth's orbit; and the amount of energy released by the sun (sun cycles). However, since the beginning of the Industrial Revolution around 1750, the average temperature of the earth has been increasing at a rate that is faster than can be explained by natural climate cycles alone.

With the Industrial Revolution came an increase in the combustion of carbon-based fuels such as wood, coal, oil, natural gas, and biomass. Industrial processes have also created emissions of substances not found in nature. This in turn has led to a marked increase in the emissions of gases shown to influence the world's climate. These gases, termed "greenhouse" gases, influence the amount of heat trapped in the Earth's atmosphere. Recently observed increased concentrations of GHGs in the atmosphere appear to be related to increases in human activity. Therefore, the current cycle of "global warming" is believed to be largely due to human activity. Of late, the issue of global warming, or global climate change, has arguably become the most important and widely debated environmental issue in the United States and the world. Because it is believed that the increased GHG concentrations around the world are related to human activity and the collective of human actions taking place throughout the world, it is quintessentially a global or cumulative issue.

1.2 Greenhouse Gases of Primary Concern

There are numerous GHGs, both naturally occurring and manmade. Each GHG has variable atmospheric lifetime and global warming potential (GWP). The atmospheric lifetime of the gas is the average time a molecule stays stable in the atmosphere. Most GHGs have long atmospheric lifetimes, staying in the atmosphere hundreds or thousands of years. GWP is a measure of the potential for a

gas to trap heat and warm the atmosphere. Although GWP is related to its atmospheric lifetime, many other factors including chemical reactivity of the gas also influence GWP. GWP is reported as a unitless factor representing the potential for the gas to affect global climate relative to the potential of carbon dioxide (CO_2). Because CO_2 is the reference gas for establishing GWP, by definition its GWP is 1. Although methane (CH_4) has a shorter atmospheric lifetime than CO_2, it has a 100-year GWP of 28; this means that CH_4 has 28 times more effect on global warming than CO_2.

The GWP is officially defined as (U.S. Environmental Protection Agency [U.S. EPA] 2010):

> The cumulative radiative forcing—both direct and indirect effects—integrated over a period of time from the emission of a unit mass of gas relative to some reference gas.

GHG emissions estimates are typically represented in terms of equivalent metric tons of CO_2 (MT CO_2E). CO_2E emissions are the product of the amount of each gas by its GWP. The effects of several GHGs may be discussed in terms of MT CO_2E and can be summed to represent the total potential of these gases to warm the global climate. Table 1 summarizes some of the most common GHGs.

It should be noted that the U.S. EPA and other organizations update the GWP values they use occasionally. This change can be due to updated scientific estimates of the energy absorption or lifetime of the gases or to changing atmospheric concentrations of GHGs that result in a change in the energy absorption of one additional ton of a gas relative to another. The GWPs shown in Table 1 are the most current. However, it should be noted that in the California Emissions Estimator Model (CalEEMod), which is the model used in this analysis to calculate emission, CH_4 has a GWP of 25 and nitrous oxide (N_2O) has a GWP of 298, consistent with the *2017 Climate Change Scoping Plan Update, the Strategy for Achieving California's 2030 Greenhouse Gas Target* (2017 Scoping Plan; California Air Resources Board [CARB] 2017).

All of the gases in Table 1 are produced by either biogenic (natural) source or anthropogenic (human) sources or both. These are the GHGs of primary concern in this analysis. CO_2 would be emitted by the project due to the combustion of fossil fuels in vehicles (including construction), from electricity generation and natural gas consumption, from water use, and from solid waste disposal. Smaller amounts of CH_4 and N_2O would be emitted from the same project operations.

Table 1
Global Warming Potentials and Atmospheric Lifetimes
(years)

Gas	Atmospheric Lifetime (years)	100-year GWP	20-year GWP
Carbon dioxide (CO_2)	50–200	1	1
Methane (CH_4)	12.4	25/28*	84
Nitrous oxide (N_2O)	121	298/265*	264
HFC-23	222	12,400	10,800
HFC-32	5.2	677	2,430
HFC-125	28.2	3,170	6,090
HFC-134a	13.4	1,300	3,710
HFC-143a	47.1	4,800	6,940

Table 1 Global Warming Potentials and Atmospheric Lifetimes (years)			
Gas	Atmospheric Lifetime (years)	100-year GWP	20-year GWP
HFC-152a	1.5	138	506
HFC-227ea	38.9	3,350	5,360
HFC-236fa	242	8,060	6,940
HFC-43-10mee	16.1	1,650	4,310
CF_4	50,000	6,630	4,880
C_2F_6	10,000	11,100	8,210
C_3F_8	2,600	8,900	6,640
C_4F_{10}	2,600	9,200	6,870
c-C_4F_8	3,200	9,540	7,110
C_5F_{12}	4,100	8,550	6,350
C_6F_{14}	3,100	7,910	5,890
SF_6	3,200	23,500	17,500
SOURCE: Intergovernmental Panel on Climate Change (IPCC) 2007, 2014. *The CH_4 and N_2O 100-year GWPs included in CalEEMod are 25 and 298, respectively, from the IPCC Fourth Assessment Report. All other values are from the current Fifth Assessment Report.			

2.0 Project Description

The project is located at 23835 Temescal Canyon Road in unincorporated Riverside County, California. The project site is located west of Interstate 15 (I-15) freeway, and is bounded by Temescal Canyon Road to the east and Lawson Road to the west. The project site is abutted by vacant land to the north, west, and south, and a commercial center with gas station to the west. Single-family residential uses are located to the southwest, west, and northwest. The 29.23-acre project site is currently partially undeveloped and partially developed with Mission Clay Products. Figure 1 shows the regional location. Figure 2 shows an aerial photograph of the project site and vicinity.

The project proposes the subdivision of the three existing parcels (283-180-020, 283-180-021, and 283-180-002) to create four new lots to accommodate light industrial/office and commercial uses onsite. Four entitlement actions are being processed concurrently in support of the proposed development. The Applicant has submitted a Tentative Tract Map, General Plan Amendment application, a Zone Change application, and a Plot Plan, accordingly.

FIGURE 1
Regional Location

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Image Source: NearMap (flown September 2023)

Project Boundary

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FIGURE 2

Project Location on Aerial Photograph

The project proposes the construction of a 188,000-square-foot building on one parcel and three sheet-graded parcels fronting on Temescal Canyon Road for future retail/restaurant ground lease building pads. The new proposed building would include a clay-related commercial business and museum. The operations of the business would be enclosed inside of the new building with limited exterior yard use in screened and secured areas. The future retail/restaurant uses would include a 2,500-square-foot coffee shop with drive-through, a 2,900-square-foot fast casual restaurant, and a 5,000-square-foot fast food restaurant with drive-through. Figure 3 shows the proposed site plan.

Tentative Tract Map

The Applicant has applied for a Tentative Tract Map to create new legal lots of the three subject parcels as well as two adjacent parcels adjoining the proposed project. A total of six numbered lots and two lettered lots are created through this mapping action. The Tentative Tract Map seeks to create a parcel to support the continued operation of Laguna Clay in Temescal Canyon, while also creating commercial parcels capable of supporting commercial development consistent with that envisioned in the Riverside County General Plan and Temescal Canyon Area Plan.

General Plan Amendment

The Applicant has submitted a General Plan Amendment to redesignate one of the proposed lots (Lot 4) from Commercial Tourist to Light Industrial. The redesignation of the proposed lot, in conjunction with the Zone Change application, would make the existing Laguna Clay facility a conforming use under the Riverside County General Plan. Importantly, this redesignation from Commercial Tourist to Light Industrial is not a foundational General Plan Amendment, as both designations are within the Community Development foundational land use. The remaining three parcels would retain the existing Commercial Tourist land use.

Zone Change

The Applicant has submitted a Zone Change application to designate the proposed Lot 4 from Scenic Highway Commercial (C-P-S) to Manufacturing-Service Commercial (M-SC). The change of zone would allow the existing Laguna Clay operation to be designated a conforming use. The three remaining parcels would remain zoned C-P-S.

Plot Plan

The Applicant has submitted a Plot Plan for a 188,000-square-foot concrete tilt up building (including tenant improvements) to create a new facility for Laguna Clay's operations. The proposed grading to support the new facility largely maintains the current raised elevation above Temescal Canyon Road and steps up approximately 45 feet from the retail parcel elevation to the proposed Light Industrial pad elevation.

Map Source: Kimley Horn

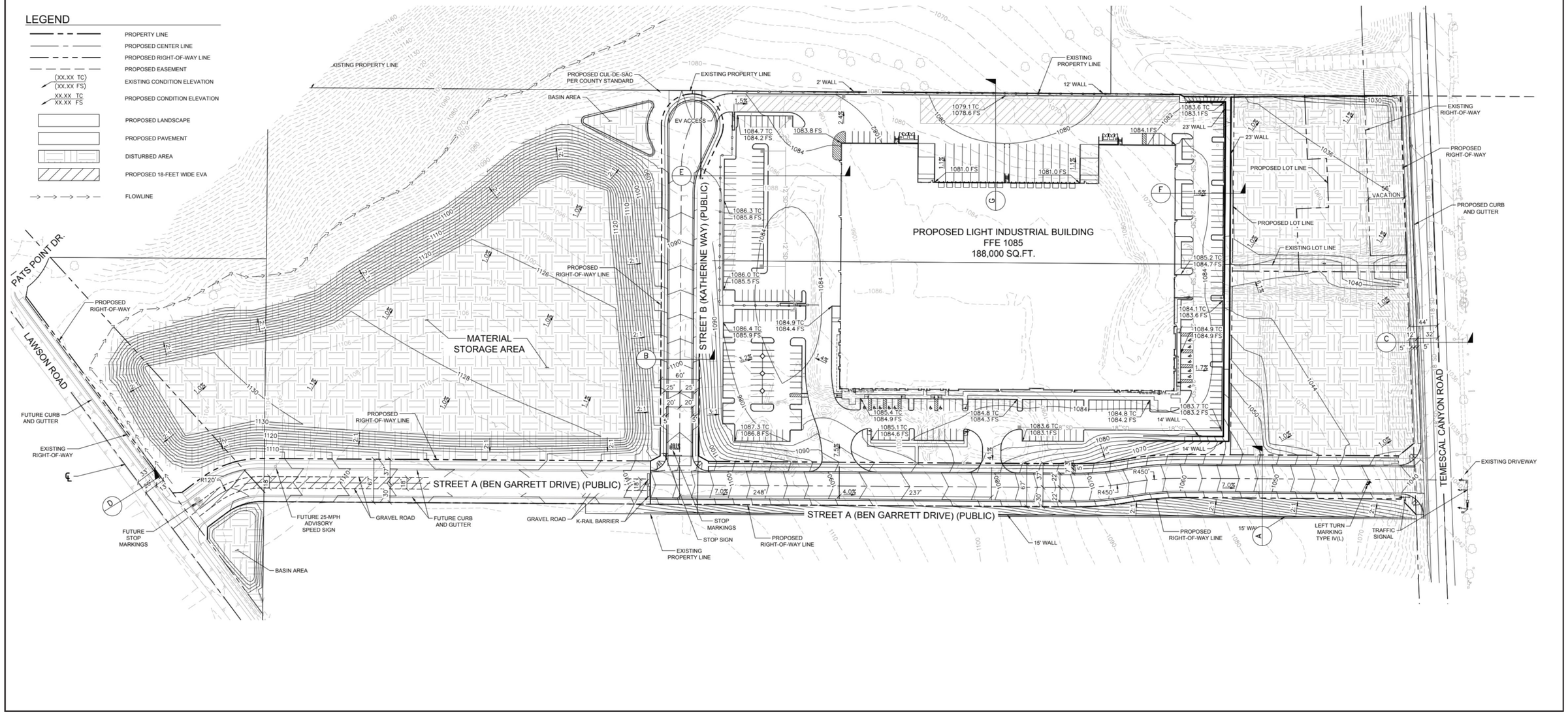

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FIGURE 3
Site Plan

Roadways

To serve the new development, there are two new proposed streets to be constructed. Proposed Street A (Ben Garrett Drive) would provide access from Temescal Canyon Road extending west to the intersection with new proposed Street B (Katherine Way) that extends north terminating at an offset cul-de-sac.

3.0 Existing Conditions

3.1 Environmental Setting

3.1.1 State GHG Inventory

The CARB performs statewide GHG inventories. The inventory is divided into nine broad sectors of economic activity: agriculture, commercial, electricity generation, forestry, high GWP emitters, industrial, recycling and waste, residential, and transportation. Emissions are quantified in million metric tons of CO_2 equivalent (MMT CO_2E). Table 2 shows the estimated statewide GHG emissions for the years 1990, 2008, 2010, and 2020. Although annual GHG inventory data is available for years 2000 through 2020, the years 1990, 2010, 2017 and 2020 are highlighted in Table 2 because 1990 is the baseline year for established reduction targets, 2010 and 2017 correspond to the same years for which inventory data for the region and the County is available, and 2020 is the most recent data available.

Table 2
California GHG Emissions by Sector

Sector	1990[1] Emissions in MMT CO_2E (% total)[2]	2010[3] Emissions in MMT CO_2E (% total)[2]	2017[3] Emissions in MMT CO_2E (% total)[2]	2020[3] Emissions in MMT CO_2E (% total)[2]
Electricity Generation	110.5 (25.7%)	90.5 (20.2%)	64.4 (15.7%)	59.8 (16.2%)
Transportation	150.6 (35.0%)	170.2 (38.0%)	171.0 (41.6%)	139.9 (37.9%)
Industrial	105.3 (24.4%)	101.3 (22.6%)	93.3 (22.7%)	85.3 (23.1%)
Commercial	14.4 (3.4%)	20.1 (4.5%)	21.8 (5.3%)	22.0 (6.0%)
Residential	29.7 (6.9%)	32.1 (7.2%)	28.4 (6.9%)	30.7 (8.3%)
Agriculture & Forestry	18.9 (4.4%)	33.7 (7.5%)	31.7 (7.7%)	31.6 (8.6%)
Not Specified	1.3 (0.3%)	-	--	-
TOTAL[4]	**430.7**	**447.9**	**410.6**	**369.3**

SOURCE: CARB 2007 and 2022a.
[1]1990 data was obtained from the CARB 2007 source and are based on IPCC fourth assessment report GWPs.
[2]Percentages may not total 100 due to rounding.
[3]2008, 2010, and 2020 data was retrieved from the CARB 2022 source and are based on IPCC fourth assessment report GWPs.
[4]Totals may vary due to independent rounding.

As shown in Table 2, statewide GHG source emissions totaled approximately 431 MMT CO_2E in 1990, 448 MMT CO_2E in 2010, 411 MMT CO_2E in 2017, and 369 MMT CO_2E in 2020. Many factors affect

year-to-year changes in GHG emissions, including economic activity, demographic influences, environmental conditions such as drought, and the impact of regulatory efforts to control GHG emissions. As shown in Table 2, transportation-related emissions consistently contribute to the most GHG emissions.

3.1.2 Regional GHG Inventory

In September 2014, the Western Riverside Council of Governments adopted the *Subregional Climate Action Plan* (Western Riverside Council of Governments 2014). The plan inventoried existing emissions within western Riverside County and outlines measures to reduce future emissions. The communitywide GHG emissions were calculated using the International Council for Local Environmental Initiatives U.S. Community Protocol. The results of the community inventory for 2010 are summarized in Table 3. Similar to the statewide emissions, transportation-related GHG emissions contributed the most countywide, followed by emissions associated with energy use.

Table 3
Western Riverside County GHG Emissions in 2010

Source	2010 Baseline Emissions	
	MT CO_2E	%
Transportation	3,317,387	56.9%
Commercial/Industrial Energy	1,226,479	21.0%
Residential Energy	1,167,843	20.0%
Waste	112,161	1.9%
Wastewater	10,531	0.2%
TOTAL INVENTORY	**5,834,400**	-

SOURCE: Western Riverside Council of Governments 2014.
NOTE: Total may vary due to independent rounding.

3.1.3 Local GHG Inventory

A 2017 GHG emissions inventory was conducted in conjunction with preparation of the County's CAP. The results are summarized in Table 4.

Table 4 2017 Communitywide GHG Emissions by Source		
	2017 Baseline Emissions	
Source	MT CO_2E	%
Transportation (on-road)	1,766,784	36.02
Agriculture	1,670,954	34.06
Energy (Electricity and Natural Gas)	1,188,138	24.22
Solid Waste	204,365	4.17
Water and Wastewater	44,606	0.91
Aviation	26,786	0.55
Off-Road Sources	3,883	0.08
TOTAL	**4,905,516***	**100**

MT CO_2E = metric tons of carbon dioxide equivalent
*CAP reports a total of 4,905,518. This is likely due to rounding.
SOURCE: County of Riverside 2019.

3.2 Regulatory Background

In response to rising concern associated with increasing GHG emissions and global climate change impacts, several plans and regulations have been adopted at the international, national, and state levels with the aim of reducing GHG emissions. The following is a discussion of the federal, state, and local plans and regulations most applicable to the project.

3.2.1 Federal

3.2.1.1 U.S. Environmental Protection Agency

In 2009, the U.S. EPA issued its science-based finding that the buildup of heat-trapping GHGs in the atmosphere endangers public health and welfare. The "Endangerment Finding" reflects the overwhelming scientific evidence on the causes and impacts of climate change. It was made after a thorough rulemaking process considering thousands of public comments and was upheld by the federal courts.

The U.S. EPA has many federal level programs and projects to reduce GHG emissions. The U.S. EPA provides technical expertise and encourages voluntary reductions from the private sector. One of the voluntary programs applicable to the project is the Energy Star program. Energy Star products such as appliances, building products, heating and cooling equipment, and other energy-efficient equipment will be utilized by the project.

Energy Star is a joint program of U.S. EPA and the U.S. Department of Energy, which promotes energy-efficient products and practices. Tools and initiatives include the Energy Star Portfolio Manager, which helps track and assess energy and water consumption across an entire portfolio of buildings, and the Energy Star Most Efficient 2020, which provides information on exceptional products which represent the leading edge in energy-efficient products in the year 2020 (U.S. EPA 2020a).

The U.S. EPA also collaborates with the public sector, including states, tribes, localities, and resource managers, to encourage smart growth, sustainability preparation, and renewable energy and climate change preparation. These initiatives include the Clean Energy – Environment State Partnership Program, the Climate Ready Water Utilities Initiative, the Climate Ready Estuaries Program, and the Sustainable Communities Partnership (U.S. EPA 2020b).

3.2.1.2 Corporate Average Fuel Economy Standards

The federal Corporate Average Fuel Economy standards determine the fuel efficiency of certain vehicle classes in the U.S. The National Highway Traffic Safety Administration (NHTSA) sets Corporate Average Fuel Economy standards for passenger cars and for light trucks (collectively, light-duty vehicles) and separately sets fuel consumption standards for medium- and heavy-duty trucks and engines. With improved gas mileage, fewer gallons of transportation fuel would be combusted to travel the same distance, thereby reducing nationwide GHG emissions associated with vehicle travel. The most recent standards require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024 and 2025 and 10 percent annually for model year 2026.

3.2.2 State

The state of California has adopted a number of plans and regulations aimed at identifying statewide and regional GHG emissions caps, GHG emissions reduction targets, and actions and timelines to achieve the target GHG reductions.

3.2.2.1 Executive Orders and Statewide GHG Emission Targets

Executive Order S-3-05

Executive Order (EO) S-3-05 established the following GHG emission reduction targets for the state of California:

- by 2010, reduce GHG emissions to 2000 levels;
- by 2020, reduce GHG emissions to 1990 levels;
- by 2050, reduce GHG emissions to 80 percent below 1990 levels.

This EO also directs the secretary of the California Environmental Protection Agency to oversee the efforts made to reach these targets, and to prepare biannual reports on the progress made toward meeting the targets and on the impacts to California related to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. With regard to impacts, the report shall also prepare and document mitigation and adaptation plans to combat the impacts. The first Climate Action Team Assessment Report was produced in March 2006, and has since been updated every two years.

Executive Order B-30-15

EO B-30-15, issued on April 29, 2015, establishes an interim GHG emission reduction goal for the state of California by 2030 of 40 percent below 1990 levels. This EO also directed all state agencies with jurisdiction over GHG emitting sources to implement measures designed to achieve the new interim 2030 goal, as well as the pre-existing, long-term 2050 goal identified in EO S-3-05. Additionally, this EO directed CARB to update its Climate Change Scoping Plan to address the 2030 goal.

Assembly Bill 1279

Assembly Bill (AB) 1279, approved in September 2022, requires the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below 1990 levels. The bill would require the state board to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies.

3.2.2.2 California Global Warming Solutions Act

In response to EO S-3-05, the California Legislature passed AB 32, the California Global Warming Solutions Act of 2006, and thereby enacted Sections 38500–38599 of the California Health and Safety Code. The heart of AB 32 is its requirement that CARB establish an emissions cap and adopt rules and regulations that would reduce GHG emissions to 1990 levels by 2020. AB 32 also required CARB to adopt a plan by January 1, 2009, indicating how emission reductions would be achieved from significant GHG sources via regulations, market mechanisms, and other actions.

In 2008, CARB estimated that annual statewide GHG emissions were 427 MMT CO_2E in 1990 and would reach 596 MMT CO_2E by 2020 under a business as usual (BAU) condition (CARB 2008). To achieve the mandate of AB 32, CARB determined that a 169 MMT CO_2E (or approximate 28.5 percent) reduction in BAU emissions was needed by 2020. In 2010, CARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. CARB determined that the economic downturn reduced the 2020 BAU by 55 MMT CO_2E; as a result, achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 (not 28.5) percent from the 2020 BAU. California has achieved its 2020 goal.

Approved in September 2016, Senate Bill (SB) 32 updates the California Global Warming Solutions Act of 2006 and enacts EO B-30-15. Under SB 32, the state would reduce its GHG emissions to 40 percent below 1990 levels by 2030. This is equivalent to an emissions level of approximately 260 MMT CO_2e for 2030. In implementing the 40 percent reduction goal, CARB is required to prioritize emissions reductions to consider the social costs of the emissions of GHGs; where "social costs" is defined as "an estimate of the economic damages, including, but not limited to, changes in net agricultural productivity; impacts to public health; climate adaptation impacts, such as property damages from increased flood risk; and changes in energy system costs, per metric ton of greenhouse gas emission per year."

3.2.2.3 Climate Change Scoping Plan

As directed by the California Global Warming Solutions Act of 2006, in 2008, CARB adopted the *Climate Change Scoping Plan: A Framework for Change* (Scoping Plan), which identifies the main strategies California will implement to achieve the GHG reductions necessary to reduce forecasted BAU emissions in 2020 to the state's historic 1990 emissions level (CARB 2008). In November 2017, CARB released the 2017 Scoping Plan; CARB 2017). The 2017 Scoping Plan identifies state strategies for achieving the state's 2030 GHG emissions reduction target codified by SB 32. Measures under the 2017 Scoping Plan Scenario build on existing programs such as the Low Carbon Fuel Standard, Advanced Clean Cars Program, Renewables Portfolio Standard (RPS), Sustainable Communities Strategy (SCS), Short-Lived Climate Pollutant Reduction Strategy, and the Cap-and-Trade Program. Additionally, the 2017 Scoping Plan proposes new policies to address GHG emissions from natural and working lands. The *2022 Scoping Plan Update for Achieving Carbon Neutrality* (2022 Scoping Plan; CARB 2022b) was adopted in December 2022. The 2022 Scoping Plan assesses the progress towards the 2030 GHG emissions reduction target identified in the 2017 Scoping Plan and lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. The 2022 Scoping Plan identifies strategies related to clean technology, energy development, natural and working lands, and others, and is designed to meet the state's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

3.2.2.4 Regional Emissions Targets – Senate Bill 375

SB 375, the 2008 Sustainable Communities and Climate Protection Act, was signed into law in September 2008 and requires CARB to set regional targets for reducing passenger vehicle GHG emissions in accordance with the Scoping Plan. The purpose of SB 375 is to align regional transportation planning efforts, regional GHG reduction targets, and fair-share housing allocations under state housing law. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a SCS or Alternative Planning Strategy to address GHG reduction targets from cars and light-duty trucks in the context of that MPO's Regional Transportation Plan. Southern California Association of Governments (SCAG) is the region's MPO. In 2018, CARB set targets for the SCAG region of an 8 percent reduction in GHG emissions per capita from automobiles and light-duty trucks compared to 2005 levels by 2020 and a 19 percent reduction by 2035. These targets are periodically reviewed and updated.

3.2.2.5 Renewables Portfolio Standard

The RPS promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "Initial RPS"), the goal has been accelerated and increased by EOs S-14-08 and S-21-09 to a goal of 33 percent by 2020. In April 2011, SB 2 (1X) codified California's 33 percent RPS goal. SB 350 (2015) increased California's renewable energy mix goal to 50 percent by year 2030. SB 100 (2018) further increased the standard set by SB 350 establishing the RPS goal of 44 percent by the end of 2024, 52 percent by the end of 2027, and 60 percent by 2030.

3.2.2.6 Assembly Bill 341 – Solid Waste Diversion

The Commercial Recycling Requirements mandate that businesses (including public entities) that generate 4 cubic yards or more of commercial solid waste per week and multi-family residential with five units or more arrange for recycling services. Businesses can take one or any combination of the following in order to reuse, recycle, compost, or otherwise divert solid waste from disposal. Additionally, AB 341 mandates that 75 percent of the solid waste generated be reduced, recycled, or composted by 2020.

3.2.2.7 California Code of Regulations, Title 24 – California Building Code

The California Code of Regulations, Title 24, is referred to as the California Building Code, or CBC. It consists of a compilation of several distinct standards and codes related to building construction, including plumbing, electrical, interior acoustics, energy efficiency, handicap accessibility, and so on. Of particular relevance to GHG reductions are the CBC's energy efficiency and green building standards as outlined below.

a. Title 24, Part 6 – Energy Efficiency Standards

The California Code of Regulations, Title 24, Part 6 is the California Energy Efficiency Standards for Residential and Nonresidential Buildings (also known as the California Energy Code). This code, originally enacted in 1978, establishes energy-efficiency standards for residential and nonresidential buildings in order to reduce California's energy consumption. The Energy Code is updated periodically to incorporate and consider new energy-efficient technologies and methodologies as they become available, and incentives in the form of rebates and tax breaks are provided on a sliding scale for buildings achieving energy efficiency above the minimum standards.

The current 2022 Title 24 Building Energy Efficiency Standards went into effect on January 1, 2023. The 2022 Energy Code increases on-site renewable energy generation from solar, increases electric load flexibility to support grid reliability, reduces emissions from newly constructed buildings, reduces air pollution for improved public health, and encourages adoption of environmentally beneficial efficient electric technologies.

New construction and major renovations must demonstrate their compliance with the current Energy Code through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC). The compliance reports must demonstrate a building's energy performance through use of CEC approved energy performance software that shows iterative increases in energy efficiency given the selection of various heating, ventilation, and air conditioning; sealing; glazing; insulation; and other components related to the building envelope.

b. Title 24, Part 11 – California Green Building Standards

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11 first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 CBC). The most recent 2022 CALGreen institutes mandatory minimum environmental

performance standards for all ground-up new construction of nonresidential and residential structures. Local jurisdictions must enforce the minimum mandatory Green Building Standards and may adopt additional amendments for stricter requirements. The mandatory measures are related to planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. 2022 CALGreen also includes two tiers of residential and nonresidential voluntary measures that encourage local jurisdictions to raise the sustainability goals: Tier 1 adds additional requirements beyond the mandatory measures, and Tier 2 further increases the requirements.

Similar to the reporting procedure for demonstrating Energy Code compliance in new buildings and major renovations, compliance with the CALGreen mandatory requirements must be demonstrated through completion of compliance forms and worksheets.

3.2.3 Local

3.2.3.1 South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) is the agency responsible for air quality planning and regulation in the South Coast Air Basin. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the South Coast Air Basin. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – *Interim CEQA GHG Significance Thresholds for Stationary Sources, Rules, and Plans*, which could be applied by lead agencies. The working group met again in 2010 to review the guidance. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach (SCAQMD 2008, 2010):

- Tier 1 – The project is exempt from the California Environmental Quality Act (CEQA).
- Tier 2 – The project is consistent with an applicable regional GHG emissions reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.

- Tier 3 – Project GHG emissions represent an incremental increase below or mitigated to less than Significance Screening Levels, where
    - Residential/Commercial Screening Level
        - Option 1: 3,000 MT CO_2E screening level for all residential/commercial land uses
        - Option 2: Screening level thresholds for land use type acceptable if used consistently by a lead agency:
            - Residential: 3,500 MT CO_2E
            - Commercial: 1,400 MT CO_2E
            - Mixed-Use: 3,000 MT CO_2E
    - 10,000 MT CO_2E is the Permitted Industrial Screening Level

- Tier 4 – The project achieves performance standards, where performance standards may include:
    - Option 1: Percent emission reduction target. SCAQMD has no recommendation regarding this approach at this time.
    - Option 2: The project would implement substantial early implementation of measures identified in the CARB's Scoping Plan. This option has been folded into Option 3.
    - Option 3: SCAQMD Efficiency Targets.
        - 2020 Targets: 4.8 MT CO_2E per service population for project-level analyses or 6.6 MT CO_2E per service population for plan level analyses where service population includes residential and employment populations provided by a project.
        - 2035 Targets: 3.0 MT CO_2E per service population for project-level analyses or 4.1 MT CO_2E per service population for plan level analyses.

- Tier 5 – Offsets along or in combination with the above target Significance Screening Level. Offsets must be provided for a 30-year project life, unless the project life is limited by permit, lease, or other legally binding condition.

If a project complies with any one of these tiers, its impacts related to GHG emissions would be considered less than significant.

The SCAQMD's interim thresholds used the EO S-3-05 year 2050 goal as the basis for the Tier 3 screening level. Achieving the EO's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 parts per million, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009, includes the following rules:

- Rule 2700 defines terms and post global warming potentials.
- Rule 2701, SoCal Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

3.2.3.2 Southern California Association of Governments

In September 2020, SCAG adopted Connect SoCal, the 2020-2045 Regional Transportation Plan/SCS South Coast Air Basin. The Connect SoCal plan identifies that land use strategies that focus on new housing and job growth in areas with a variety of destinations and mobility options would support and complement the proposed transportation network. The overarching strategy in Connect SoCal is to provide for a plan that allows the southern California region to grow in more compact communities in transit priority areas and priority growth areas; provide neighborhoods with efficient and plentiful public transit; establish abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands and farmlands (SCAG 2020). The Connect SoCal plan contains transportation projects to help more efficiently distribute population, housing, and employment growth as well as projected development that promotes active transport and reduces GHG emissions.

3.2.3.3 County of Riverside

a. General Plan

The Air Quality Element of the County's General Plan (County of Riverside 2018) contains the following policies related to GHG emissions:

> AQ 18.1 **Baseline emissions inventory and forecast**. Riverside County CAP has included baseline emissions inventory with data from the County's CO2e emissions, for specific sectors and specific years. The carbon inventory greatly aids the process of determining the type, scope and number of GHG reduction policies needed. It also facilitates the tracking of policy implementation and effectiveness. The carbon inventory for the County consists of two distinct components; one inventory is for the County as a whole, as defined by its geographical borders and the other inventory is for the emissions resulting from the County's municipal operations.
>
> AQ 18.2 **Adopt GHG emissions reduction targets**. Pursuant to the results of the Carbon Inventory and Greenhouse Gas Analysis for Riverside County, future development proposed as a discretionary project pursuant to the General Plan shall achieve sufficient reductions in greenhouse gas emissions in order to be found consistent with the County's Climate Action Plan (CAP).

AQ 18.3 **Develop a Climate Action Plan for reducing GHG emissions**. The Riverside County CAP has been developed to formalize the measure necessary to achieve County GHG emissions reduction targets. The CAP includes both the policies necessary to meet stated targets and objectives are met. These targets, objectives and Implementation Measures may be refined, superseded or supplemented as warranted in the future.

AQ 18.4 **Implement policies and measures to achieve reduction targets**. The County shall implement the greenhouse gas reduction policies and measures established under the County Climate Action Plan for all new discretionary development proposals.

AQ 18.5 **Monitor and verify results.** The County shall monitor and verify the progress and results, and make any necessary revisions to, the CAP by 2020 and a minimum every four years thereafter. The progress and results of, and revisions to, the CAP will be made available to the public for review prior to approval. If monitoring reveals that the targets of the CAP are not being met, the CAP shall be revised to ensure that any changes needed to stay 'on target' with the stated goals are accomplished.

AQ 19.1 Continue to coordinate with CARB, SCAQMD, and the State Attorney General's office to ensure that the milestones and reduction strategies presented in the General Plan and the CAP adequately address the county's GHG emissions.

AQ 19.2 Utilize County's CAP as the guiding document for determining County's greenhouse gas reduction thresholds and implementation programs. Implementation of the CAP and its monitoring program shall include the ability to expand upon, or where appropriate, update or replace the Implementation Measures established herein such that the implementation of the CAP accomplishes the greenhouse gas reduction targets.

b. Climate Action Plan (CAP)

The CAP Update (November 2019) establishes GHG emission reduction programs and regulations that correlate with and support evolving state GHG emissions reduction goals and strategies. The CAP Update includes reduction targets for year 2030 and year 2050. These reduction targets require the County to reduce emissions by at least 525,511 MT CO_2E below the adjusted BAU scenario by 2030 and at least 2,982,948 MT CO_2E below the adjusted BAU scenario by 2050.

To evaluate consistency with the CAP Update, the County has implemented CAP Update Screening Tables (Screening Tables) to aid in measuring the reduction of GHG emissions attributable to certain design and construction measures incorporated in development projects. To this end, the Screening Tables establish categories of GHG Implementation Measures. Under each Implementation Measure category, mitigation, or project design feature (collectively "features") are assigned point values that correspond to the minimum GHG emissions reduction that would result from each feature. Projects that yield at least 100 points are considered to be consistent with the GHG emissions reduction quantities anticipated in the County's GHG Technical Report and support the GHG emissions reduction targets established under the CAP Update. The potential for such projects to generate direct or indirect GHG emissions that would result in a significant impact on the environment; or

conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs would be considered less than significant.

4.0 Significance Criteria and Analysis Methodologies

4.1 Determining Significance

Based on the CEQA Guidelines Appendix G, impacts related to GHG emissions would be significant if the project would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs.

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 County's 2019 CAP Update was approved on December 17, 2019. The 2019 CAP Update refines the County's efforts to meet GHG reduction strategies, specifically for the years 2035 and 2050. The 2019 CAP Update builds upon the GHG reduction strategies in the 2015 CAP.

Analysis of GHG emissions and potential climate change impacts from new development is required under CEQA. The CAP is a plan for the reduction of GHG emissions in accordance with CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3) and 15130(b), a project's incremental contribution to GHG emissions may be determined not to be cumulatively considerable if it complies with the requirements of the CAP.

The CAP Update identifies a two-step approach in evaluating GHG emissions. First, a screening threshold of 3,000 MT CO_2E per year is used to determine if additional analysis is required. Projects that exceed 3,000 MT CO_2E per year will be required to utilize the Screening Tables (discussed in Section 3.2.3.3b) or prepare a project-specific technical analysis to quantify and mitigate project emissions. Projects that garner at least 100 points from the Screening Tables are determined to be consistent with the reduction quantities anticipated in the CAP Update. As such, projects that achieve a total of 100 points or more are considered to have a less than significant individual and cumulative impact on GHG emissions.

CEQA Guidelines Section 15064.4(a) states that a lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. Therefore, GHG emissions as estimated by CalEEMod are provided for informational purposes and are compared to the SCAQMD screening level thresholds.

4.2 Calculation Methodology

The project's GHG emissions were calculated using the CalEEMod Version 2022.1 (California Air Pollution Control Officers Association [CAPCOA] 2022). The CalEEMod program is a tool used to estimate air emissions resulting from land development projects based on California-specific emission factors. CalEEMod can be used to calculate emissions from mobile (on-road vehicles), energy (electricity and natural gas), area (landscape maintenance equipment), water and wastewater, and solid waste sources. GHG emissions are estimated in terms of total MT CO_2E.

The analysis methodology and input data are described in the following sections. Where project-specific data was not available, model inputs were based on information provided in the CalEEMod User's Guide (CAPCOA 2022). Operational emissions were calculated for the projected soonest project operational year of 2026.

4.2.1 Construction Emissions

Construction activities emit GHGs primarily though combustion of fuels (mostly diesel) in the engines of off-road construction equipment and through combustion of diesel and gasoline in on-road construction vehicles and the commute vehicles of the construction workers. Smaller amounts of GHGs are also emitted through the energy use embodied in water use for fugitive dust control.

Every phase of the construction process, including demolition, grading, paving, and building, emits GHGs in volumes directly related to the quantity and type of construction equipment used when building the project. GHG emissions associated with each phase of project construction are calculated by multiplying the total fuel consumed by the construction equipment and worker trips by applicable emission factors.

Standard construction equipment includes dozers, rollers, scrapers, dewatering pumps, backhoes, loaders, paving equipment, delivery/haul trucks, jacking equipment, welding machines, pile drivers, and so on. Specific construction phasing and equipment parameters are not available at this time. However, CalEEMod can estimate the required construction equipment when project-specific information is unavailable. The estimates are based on surveys, performed by the SCAQMD and the Sacramento Metropolitan Air Quality Management District, of typical construction projects that provide a basis for scaling equipment needs and schedule with a project's size. GHG 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. The construction schedule is based on the default construction phases, which include demolition, site preparation, grading, building construction, paving, and architectural coatings. Project site grading would require 261,000 cubic yards of cut and 240,000 cubic yards of fill, for a total of 21,000 cubic yards of soil export. The project would use the parcel to the west as an off-site material

storage area; however, as a conservative analysis, soil export was modeled with a default on-way trip distance of 20 miles. Table 5 summarizes the modeled construction parameters.

Table 5
Construction Phases and Equipment

Equipment	Quantity	Daily Operation Time (hours)
Demolition (30 days)		
Rubber Tired Dozers	2	8
Excavators	3	8
Concrete/Industrial Saw	1	8
Site Preparation (20 days)		
Rubber Tired Dozers	3	8
Tractors/Loaders/Backhoes	4	8
Grading (45 days)		
Grader	1	8
Excavators	2	8
Tractors/Loaders/Backhoes	2	8
Scrapers	2	8
Rubber Tired Dozer	1	8
Building Construction (440 days)		
Forklifts	3	8
Generator Set	1	8
Crane	1	7
Welder	1	8
Tractors/Loaders/Backhoes	3	7
Paving (35 days)		
Pavers	2	8
Paving Equipment	2	8
Rollers	2	8
Architectural Coatings (35 days)		
Air Compressor	1	6
NOTE: Each phase would also include vehicles associated with work commutes, dump trucks for hauling, and trucks for deliveries.		

Based on guidance from the SCAQMD, total construction GHG emissions resulting from a project should be amortized over 30 years and added to operational GHG emissions to account for their contribution to GHG emissions over the lifetime of a project (SCAQMD 2009).

4.2.2 Mobile Emissions

GHG emissions from vehicles come from the combustion of fossil fuels in vehicle engines. Mobile source operational emissions are based on the trip rate, trip length, and vehicle mix. Project trip generation was obtained from the Traffic Impact Analysis which utilizes trip rates from the ITE Trip Generation Manual, 11th Edition. CalEEMod default trip lengths were modeled utilizing default vehicle

emission factors based on CARB's 2021 emissions factor model. Project trip generation is summarized in Table 6.

Table 6
Project Trip Generation

Use	Daily Trips	AM Peak Hour	PM Peak Hour
Manufacturing (188,000 square feet)			
Passenger Cars	701	102	109
2 Axle Trucks	107	14	17
3 Axle Trucks	71	11	11
4+ Axle Trucks	254	34	39
Manufacturing Subtotal	*1,133*	*161*	*176*
Internal Capture[1]	-127	-13	-9
Manufacturing Total	**1,006**	**148**	**167**
Coffee Shop with Drive-Through (2,500 square feet)	1,334	215	97
Internal Capture[1]	-40	-6	-3
Coffee Shop Subtotal	*1,294*	*209*	*94*
Pass-By Trips (25%)[2]	-324	-52	-24
Coffee Shop Total	**970**	**157**	**70**
Fast Casual Restaurant (2,900 square feet)	282	4	36
Internal Capture[1]	-8	0	-1
Fast Casual Restaurant Subtotal	*274*	*4*	*35*
Pass-By Trips (25%)[2]	-27	0	-9
Fast Casual Restaurant Total	**247**	**4**	**26**
Fast Food Restaurant with Drive-Through (5,000 square feet)	2,337	223	165
Internal Capture[1]	-70	-7	-5
Fast Food Restaurant Subtotal	*2,267*	*216*	*160*
Pass-By Trips (25%)[2]	-567	-54	-40
Fast Food Restaurant Total	**1,700**	**162**	**120**
Project Total	**3,932**	**471**	**383**

SOURCE: Linscott, Law & Greenspan, Engineers 2024.

[1]Project trip generation was adjusted to account for internal capture between the manufacturing employee and restaurant components of the project.

[2]Pass-by trips are trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on adjacent streets, which contain direct access to the generator. For this analysis, the following pass-by ITE Trip Generation Manual, 11th Edition, reduction factors were referenced:

- 930: Fast Casual Restaurant: Daily = 10% (assumed)
- 934: Fast Food Restaurant with Drive-Through Window: Daily = 25% (assumed)
- 937: Coffee/Donut Shop With Drive-Through Window: Daily = 25% (assumed)

4.2.3 Energy Use Emissions

GHGs are emitted as a result of activities in buildings for which electricity and natural gas are used as energy sources. GHGs are emitted during the generation of electricity from fossil fuels off-site in power plants. These emissions are considered indirect but are calculated in association with a building's overall operation. Electric power generation accounts for the second largest sector contributing to both inventoried and projected statewide GHG emissions. Combustion of fossil fuel emits criteria pollutants and GHGs directly into the atmosphere. When this occurs in a building, it is considered a direct emissions source associated with the building. CalEEMod estimates emissions from the direct combustion of natural gas for space and water heating.

CalEEMod estimates GHG emissions from energy use by multiplying average rates of residential and nonresidential energy consumption by the quantities of residential units and nonresidential square footage entered in the land use module to obtain total projected energy use. This value is then multiplied by electricity and natural gas GHG emission factors applicable to the project location and utility provider.

Within Title 24 of the California Code of Regulations (Building Standards Code) is Part 6, the Building Energy Efficiency Standards (Energy Code). The CEC adopted the 2022 Energy Code in August 2021, and it took effect January 1, 2023. The Energy Code contains energy conservation standards applicable to particular end-use categories for all new or altered residential and nonresidential buildings throughout California. Energy consumption values are based on the CEC's 2018–2030 Uncalibrated Commercial Sector Forecast and the 2019 Residential Appliance Saturation Survey. GHG emissions were calculated using the default CalEEMod Version 2022.1 emission factors.

The project would be served by Southern California Edison (SCE). Therefore, SCE's specific energy-intensity factors (i.e., the amount of CO_2, CH_4, and N_2O per kilowatt-hour) are used in the calculations of GHG emissions. Current and forecasted year 2025 SCE energy-intensity factors are included in CalEEMod version 2022.1. Emissions were modeled using the forecasted year 2025 energy-intensity factors. Statewide RPS goals are summarized in Section 3.2.2.5. As SCE continues to procure renewable energy sources in line with state goals, the energy-intensity factors will decrease.

4.2.4 Area Source Emissions

Area sources include criteria pollutant and GHG emissions that would occur from the use of landscaping equipment. The use of landscape equipment emits criteria pollutant and GHGs associated with the equipment's fuel combustion. Default statewide emission rates from landscaping equipment were developed using the CARB Small Off-Road Engines Model v1.1. Area sources also include consumer products and architectural coatings. However, only criteria pollutant emissions are associated with these sources and not GHG emissions. Area source emissions were calculated using default CalEEMod emission factors.

4.2.5 Water and Wastewater Emissions

The Temescal Valley Water District would provide water to the project site. The amount of water used and wastewater generated by a project has indirect GHG emissions associated with it. These emissions are a result of the energy used to supply, distribute, and treat the water and wastewater. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both CH_4 and N_2O.

CalEEMod Version 2022.1 calculates outdoor water use based the Department of Water Resources Model Water Efficient Landscape Ordinance and calculates nonresidential indoor water used based on the Pacific Institute's *Waste Not, Want Not: The Potential for Urban Water Conservation in California* 2003 (as cited in CAPCOA 2022). Wastewater treatment is based on the region-specific distribution of wastewater treatment methods (CAPCOA 2022). Water and wastewater emissions were calculated using default CalEEMod data.

4.2.6 Solid Waste Emissions

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. To calculate the GHG emissions generated by disposing of solid waste for the project, the total volume of solid waste was calculated using waste disposal rates identified by California Department of Resources Recycling and Recovery. The methods for quantifying GHG emissions from solid waste are based on the Intergovernmental Panel on Climate Change method, using the degradable organic content of waste. GHG emissions associated with the project's waste disposal were calculated using these parameters.

4.2.7 Refrigerants

Small amounts of GHG emissions result from refrigerants used in air conditioning and refrigeration equipment. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and then derives average annual emissions from the lifetime estimate. Emissions due to refrigerants were calculated using CalEEMod default values, which are based on industry data from the U.S. EPA. There would be no cold storage associated with the project; therefore, there would be no emissions due to refrigerants.

5.0 GHG Emission Calculations

Based on the methodology summarized in Section 4.2, the primary sources of direct and indirect GHG emissions have been calculated. Table 7 summarizes the total construction emissions. Table 8 summarizes the total GHG emissions associated with the project. The complete model outputs for the project are included in Attachment 1.

Table 7
Construction GHG Emissions

Year	Construction GHG Emissions MT CO_2E
2025	706
2026	534
2027	66
Total GHG Emissions	**1,306**
Amortized over 30 Years	**44**

Table 8 Project GHG Emissions	
Source	Project GHG Emissions MT CO_2E
Mobile	5,104
Energy	835
Area	4
Water/Wastewater	115
Solid Waste	110
Refrigerants	11
Construction (Amortized over 30 years)	44
Total	**6,222**

As shown, the project would result in 6,222 MT CO_2E per year. Since the project exceeds the 3,000 MT CO_2E threshold, the project is required to demonstrate compliance with the County's CAP Screening Tables and achieve a minimum 100 points as identified in the CAP.

6.0 GHG Impact Analysis

1. *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

The purpose of the CAP Update is to provide guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County. To address the state's requirement to reduce GHG emissions, the County prepared its CAP Update with the goal of reducing GHG emissions within the County by 49 percent below 2008 levels by the year 2030. The County's target is consistent with the AB 32 target and ensures that the County will be providing GHG reductions locally that will complement state efforts to reduce GHG emissions. The County's target is also consistent with the SB 32 target that expands on AB 32 to reduce GHG emissions to 40 percent below the 1990 levels by 2030. The CAP identifies a two-step approach in evaluating GHG emissions. First, a screening threshold of 3,000 MT CO_2E per year is used to determine if additional analysis is required. Projects that exceed 3,000 MT CO_2E per year will be required to utilize the Screening Tables or prepare a project-specific technical analysis to quantify and mitigate project emissions. Projects that garner at least 100 points from the Screening Tables are determined to be consistent with the reduction quantities anticipated in the CAP Update.

As shown in Table 8, the project would exceed the 3,000 MT CO_2E per year screening threshold. Therefore, the project is required to demonstrate compliance with the County's CAP Screening Tables and achieve a minimum 100 points as identified in the CAP. The project would achieve 100 points through Reduction Measure R2-T4: Electrify the Fleet. The project would implement measure T4.B.1: Electric Vehicle Recharging by providing 38 parking spaces in two areas with circuit and capacity in parking areas for installation of vehicle charging stations (2 points per area for 4 points) and installing 12 electric vehicle charging stations (8 points per station for 96 points). The project would be consistent with the CAP's requirement to achieve at least 100 points and thus the project is considered to have a less than significant individual and cumulatively considerable impact on GHG emissions. The County shall verify incorporation of the identified Screening Table Measures

within the project building plans and site designs prior to the issuance of building permit(s) and/or site plans (as applicable). The County shall verify implementation of the identified Screening Table Measures prior to the issuance of Certificate(s) of Occupancy. With achievement of 100 points per the CAP Screening Tables, the project would have a less than significant impact GHG impact.

2. *Would the project conflict with the County's CAP or an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs?*

State Plans

As discussed in Section 3.2.2, State Climate Change Regulations, EO S-3-05 established GHG emission reduction targets for the state, and AB 32 launched the CARB Climate Change Scoping Plan that outlined the reduction measures needed to reach the 2020 target. As discussed under threshold one above, the project would be consistent with the County's CAP, which is a qualified GHG reduction plan that is consistent with the 2017 Scoping Plan and emission reduction targets per SB 32. Because the project would be consistent with the CAP, it would not conflict with the Scoping Plan or SB 32.

Furthermore, project emissions would decline beyond the project buildout year as a result of continued implementation of federal, state, and local reduction measures, such as increased federal and state vehicle efficiency standards and SCE's increased renewable sources of energy in accordance with RPS goals. Based on currently available models and regulatory forecasting, project emissions would continue to decline through at least 2050. Given the reasonably anticipated decline in project emissions, once fully constructed and operational, the project is in line with the GHG reductions needed to achieve the 2050 GHG emission reduction targets identified by EO S-3-05.

Therefore, the project would not conflict with an applicable state plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and impacts would be less than significant.

Regional Plans

In addition to being consistent with the CAP, the project was evaluated for consistency with the SCS strategies contained in Connect SoCal. As discussed in Table 9 below, the project would be consistent with applicable Connect SoCal strategies, particularly by constructing a high-density residential use adjacent to existing transit. Therefore, the project would not conflict with an applicable regional plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and impacts would be less than significant.

Table 9 Project Consistency with Connect SoCal Strategies	
	Project Consistency
Focus Growth Near Destinations and Mobility Options	
• Emphasize land use patterns that facilitate multimodal access to work, educational, and other destinations. • Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets. • Plan for growth near transit investments and support implementation of first/last mile strategies. • Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses. • Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods. • Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations). • Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking).	The project would be consistent with Connect SoCal's strategies to focus growth near destinations and mobility options. The project site is currently partially undeveloped and partially developed with Mission Clay Products. The project would construct a new industrial building for Laguna Clay's operations and fast food restaurants near an existing transit route. Riverside Transit Agency Route 206 is located along Temescal Canyon Road immediately adjacent to the project site. The project would provide amenities on an underutilized site. The project would therefore be consistent with these strategies.
Promote Diverse Housing Options	
• Preserve and rehabilitate affordable housing and prevent displacement. • Identify funding opportunities for new workforce and affordable housing development. • Create incentives and reduce regulatory barriers for building context sensitive accessory dwelling units to increase housing supply. • Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions.	The project is not a residential development, therefore, these strategies are not applicable.
Leverage Technology Innovations	
• Promote low emission technologies such as neighborhood electric vehicles, shared ride hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space. • Improve access to services through technology, such as telework and telemedicine as well as other incentives such as a mobility wallet. • Identify ways to incorporate micro-power grids in communities, for example solar energy, hydrogen fuel cell power storage and power generation.	These strategies are not directly applicable to the project. The project would not interfere with SCAG's efforts to promote low emission technologies, improve access to telework and telemedicine, or incorporate micro-power grids in communities.

Table 9 Project Consistency with Connect SoCal Strategies	
	Project Consistency
Support Implementation of Sustainable Policies	
• Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions. • Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations. • Support local jurisdictions in the establishment of EIFDs, CRIAS, or other tax increment or value capture tools to finance sustainable infrastructure and development projects including parks and open space. • Work with local jurisdictions/communities to identify opportunities and assess barriers for implementing sustainability strategies. • Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region. • Continue to support long range planning efforts by local jurisdictions. • Provide educational opportunities to local decisions makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy.	These strategies are not directly applicable to the project. The project would not interfere with SCAG's efforts to work with local jurisdictions, communities, and other planning organizations to implement sustainable policies. The project would result in less than significant GHG emissions and would be located near high-quality transit.
Promote a Green Region	
• Support development of local climate adaptation and hazard mitigation plans as well as project implementation that improves community resiliency to climate change and natural hazards. • Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration. • Integrate local food production into the regional landscape. • Promote more resource efficient development focused on conservation, recycling and reclamation. • Preserve, enhance and restore regional wildlife connectivity. • Reduce consumption of resource areas, including agricultural land. • Identify ways to improve access to public park space.	Strategies regarding climate adaptation, food production, wildlife connectivity, agricultural lands, and park space are not applicable to the project. The project would be served by SCE, which has achieved 36 percent renewables and is on track to achieve future RPS goals (California Public Utilities Commission 2023). The project's energy-related GHG emissions would decrease as SCE increases its renewables procurement beyond 2020 towards the 2030 goal of 60 percent.

Local Plans

As discussed under threshold one above, the project would be consistent with the County's CAP. Therefore, the project would not conflict with an applicable local plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and impacts would be less than significant.

7.0 Conclusions

GHG emissions would be generated during construction and operation of the project. Construction activities emit GHGs primarily through the combustion of fuels in on- and off-road equipment and vehicles. Operational emissions include mobile, energy (electricity and natural gas), area (landscape maintenance equipment), water and wastewater, and solid waste sources. The County's CAP is a qualified GHG reduction plan that addresses the SB 32 target of reducing GHG emissions 40 percent below 1990 levels by 2030 and EO S-3-15 target of reducing GHG emissions 80 percent below 1990 levels by 2050. For the purposes of this analysis, the project's significance is determined by consistency with the CAP through completion of the CAP Screening Tables. The project would implement measure T4.B.1: Electric Vehicle Recharging by providing 38 parking spaces in two areas with circuit and capacity in parking areas for installation of vehicle charging stations (2 points per area for 4 points) and installing 12 electric vehicle charging stations (8 points per station for 96 points). The County shall verify incorporation of the identified Screening Table Measures within the project building plans and site designs prior to the issuance of building permit(s) and/or site plans (as applicable). The County shall verify implementation of the identified Screening Table Measures prior to the issuance of Certificate(s) of Occupancy. With achievement of 100 points per the CAP Screening Tables, the project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and impacts would be less than significant.

Additionally, the project would be consistent with applicable Scoping Plan and Connect SoCal measures and is in line with the GHG reductions needed to achieve the 2050 GHG emission reduction targets identified by EO S-3-05. Furthermore, the project would be consistent with the County's CAP. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs, and impacts would be less than significant.

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ATTACHMENT 1

CalEEMod Output

Temescal Commercial Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Temescal Commercial
Construction Start Date	1/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	21.8
Location	33.77423628572711, -117.4898845748069
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5582
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

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

Manufacturing	188	1000sqft	25.7	188,000	138,484	0.00	—	—
Fast Food Restaurant with Drive Thru	2.90	1000sqft	0.74	2,900	0.00	0.00	—	—
Fast Food Restaurant with Drive Thru	2.50	1000sqft	0.93	2,500	0.00	0.00	—	—
Fast Food Restaurant with Drive Thru	5.00	1000sqft	1.82	5,000	0.00	0.00	—	—

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.	4.08	52.7	34.2	30.9	0.09	1.31	4.91	6.23	1.21	1.78	3.00	—	10,901	10,901	0.35	0.70	9.61	11,127
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.06	52.7	34.4	31.2	0.09	1.37	7.89	9.26	1.26	3.99	5.25	—	10,880	10,880	0.35	0.70	0.25	11,097
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.77	5.27	13.5	15.6	0.03	0.52	1.91	2.43	0.48	0.63	1.11	—	4,192	4,192	0.15	0.22	2.16	4,264
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.32	0.96	2.46	2.84	0.01	0.09	0.35	0.44	0.09	0.12	0.20	—	694	694	0.02	0.04	0.36	706
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.08	3.35	34.2	30.9	0.09	1.31	4.91	6.23	1.21	1.78	3.00	—	10,901	10,901	0.35	0.70	9.61	11,127
2026	1.72	1.44	11.2	19.3	0.03	0.39	1.37	1.76	0.36	0.33	0.70	—	4,525	4,525	0.17	0.21	6.57	4,599
2027	0.21	52.7	0.89	2.23	< 0.005	0.02	0.22	0.24	0.02	0.05	0.07	—	359	359	0.01	0.01	0.70	363
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.06	3.38	34.4	31.2	0.09	1.37	7.89	9.26	1.26	3.99	5.25	—	10,880	10,880	0.35	0.70	0.25	11,097
2026	1.70	1.42	11.3	17.8	0.03	0.39	1.37	1.76	0.36	0.33	0.70	—	4,434	4,434	0.14	0.21	0.17	4,500
2027	1.63	52.7	10.8	17.4	0.03	0.35	1.37	1.72	0.32	0.33	0.66	—	4,396	4,396	0.13	0.20	0.15	4,460
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	1.77	1.47	13.5	15.6	0.03	0.52	1.91	2.43	0.48	0.63	1.11	—	4,192	4,192	0.15	0.22	2.16	4,264
2026	1.21	1.02	8.11	12.9	0.02	0.28	0.96	1.24	0.26	0.23	0.49	—	3,176	3,176	0.10	0.15	2.02	3,226
2027	0.18	5.27	1.24	2.02	< 0.005	0.05	0.10	0.15	0.04	0.02	0.07	—	394	394	0.01	0.01	0.17	398
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.32	0.27	2.46	2.84	0.01	0.09	0.35	0.44	0.09	0.12	0.20	—	694	694	0.02	0.04	0.36	706
2026	0.22	0.19	1.48	2.35	< 0.005	0.05	0.18	0.23	0.05	0.04	0.09	—	526	526	0.02	0.03	0.33	534
2027	0.03	0.96	0.23	0.37	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	65.3	65.3	< 0.005	< 0.005	0.03	66.0

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	21.7	24.1	21.1	218	0.53	0.54	46.0	46.5	0.51	11.7	12.2	280	57,415	57,695	30.4	2.20	246	59,357
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	19.1	21.7	22.5	172	0.49	0.52	46.0	46.5	0.50	11.7	12.2	280	54,009	54,288	30.5	2.27	69.9	55,797
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.5	20.6	15.6	130	0.31	0.40	28.3	28.7	0.38	7.18	7.56	280	35,721	36,001	30.0	1.53	113	37,320
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.19	3.77	2.85	23.7	0.06	0.07	5.17	5.24	0.07	1.31	1.38	46.3	5,914	5,960	4.97	0.25	18.7	6,179
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—

Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	19.8	17.8	18.5	207	0.51	0.33	46.0	46.3	0.31	11.7	12.0	—	52,047	52,047	1.78	1.95	181	52,852
Area	1.53	6.17	0.07	8.63	< 0.005	0.02	—	0.02	0.01	—	0.01	—	35.5	35.5	< 0.005	< 0.005	—	35.6
Energy	0.27	0.14	2.49	2.09	0.01	0.19	—	0.19	0.19	—	0.19	—	5,021	5,021	0.46	0.03	—	5,041
Water	—	—	—	—	—	—	—	—	—	—	—	89.4	312	401	9.19	0.22	—	697
Waste	—	—	—	—	—	—	—	—	—	—	—	190	0.00	190	19.0	0.00	—	665
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65.2	65.2
Total	21.7	24.1	21.1	218	0.53	0.54	46.0	46.5	0.51	11.7	12.2	280	57,415	57,695	30.4	2.20	246	59,357
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	18.8	16.8	20.0	170	0.48	0.33	46.0	46.3	0.31	11.7	12.0	—	48,676	48,676	1.82	2.02	4.69	49,328
Area	—	4.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.27	0.14	2.49	2.09	0.01	0.19	—	0.19	0.19	—	0.19	—	5,021	5,021	0.46	0.03	—	5,041
Water	—	—	—	—	—	—	—	—	—	—	—	89.4	312	401	9.19	0.22	—	697
Waste	—	—	—	—	—	—	—	—	—	—	—	190	0.00	190	19.0	0.00	—	665
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65.2	65.2

Total	19.1	21.7	22.5	172	0.49	0.52	46.0	46.5	0.50	11.7	12.2	280	54,009	54,288	30.5	2.27	69.9	55,797
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.1	14.8	13.1	122	0.30	0.20	28.3	28.5	0.19	7.18	7.36	—	30,364	30,364	1.35	1.28	47.7	30,827
Area	1.05	5.72	0.05	5.91	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.3	24.3	< 0.005	< 0.005	—	24.4
Energy	0.27	0.14	2.49	2.09	0.01	0.19	—	0.19	0.19	—	0.19	—	5,021	5,021	0.46	0.03	—	5,041
Water	—	—	—	—	—	—	—	—	—	—	—	89.4	312	401	9.19	0.22	—	697
Waste	—	—	—	—	—	—	—	—	—	—	—	190	0.00	190	19.0	0.00	—	665
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65.2	65.2
Total	17.5	20.6	15.6	130	0.31	0.40	28.3	28.7	0.38	7.18	7.56	280	35,721	36,001	30.0	1.53	113	37,320
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.94	2.70	2.38	22.2	0.05	0.04	5.17	5.21	0.03	1.31	1.34	—	5,027	5,027	0.22	0.21	7.90	5,104
Area	0.19	1.04	0.01	1.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.02	4.02	< 0.005	< 0.005	—	4.04
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	831	831	0.08	< 0.005	—	835
Water	—	—	—	—	—	—	—	—	—	—	—	14.8	51.7	66.5	1.52	0.04	—	115
Waste	—	—	—	—	—	—	—	—	—	—	—	31.5	0.00	31.5	3.15	0.00	—	110
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.8	10.8
Total	3.19	3.77	2.85	23.7	0.06	0.07	5.17	5.24	0.07	1.31	1.38	46.3	5,914	5,960	4.97	0.25	18.7	6,179

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	2.31	2.31	—	0.35	0.35	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.20	1.82	1.64	< 0.005	0.08	—	0.08	0.07	—	0.07	—	282	282	0.01	< 0.005	—	282
Demolition	—	—	—	—	—	—	0.19	0.19	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.33	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.6	46.6	< 0.005	< 0.005	—	46.8
Demolition	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	197
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.12	0.04	3.37	0.80	0.02	0.06	0.76	0.82	0.06	0.21	0.27	—	2,910	2,910	0.05	0.46	0.16	3,048
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.2	16.2	< 0.005	< 0.005	0.03	16.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.28	0.07	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	239	239	< 0.005	0.04	0.22	251
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.68	2.68	< 0.005	< 0.005	< 0.005	2.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.6	39.6	< 0.005	0.01	0.04	41.5

3.3. Site Preparation (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.22	0.18	1.73	1.65	< 0.005	0.07	—	0.07	0.07	—	0.07	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.0	48.0	< 0.005	< 0.005	—	48.2
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	1.02	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	227	227	0.01	0.01	0.02	230
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	12.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.08	2.08	< 0.005	< 0.005	< 0.005	2.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.60	3.60	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.60	3.60	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.47	0.39	3.66	3.49	0.01	0.15	—	0.15	0.14	—	0.14	—	814	814	0.03	0.01	—	816
Dust From Material Movement	—	—	—	—	—	—	0.44	0.44	—	0.18	0.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.67	0.64	< 0.005	0.03	—	0.03	0.03	—	0.03	—	135	135	0.01	< 0.005	—	135
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.09	0.09	1.54	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	282	282	0.01	0.01	1.04	286
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.17	0.06	4.46	1.09	0.03	0.08	1.06	1.13	0.08	0.30	0.37	—	4,020	4,020	0.07	0.63	8.57	4,219
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.17	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	259	259	0.01	0.01	0.03	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	0.06	4.66	1.11	0.03	0.08	1.06	1.13	0.08	0.30	0.37	—	4,022	4,022	0.07	0.63	0.22	4,213
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.4	32.4	< 0.005	< 0.005	0.06	32.8

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.58	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.05	—	496	496	0.01	0.08	0.45	520
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.36	5.36	< 0.005	< 0.005	0.01	5.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.11	0.02	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	82.1	82.1	< 0.005	0.01	0.08	86.0

3.7. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.51	4.68	5.84	0.01	0.19	—	0.19	0.18	—	0.18	—	1,074	1,074	0.04	0.01	—	1,078
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.85	1.07	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.37	0.36	6.44	0.00	0.00	1.09	1.09	0.00	0.26	0.26	—	1,174	1,174	0.05	0.04	4.32	1,192
Vendor	0.04	0.02	1.09	0.34	0.01	0.01	0.28	0.29	0.01	0.08	0.09	—	995	995	0.02	0.15	2.82	1,043
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.35	0.40	4.86	0.00	0.00	1.09	1.09	0.00	0.26	0.26	—	1,080	1,080	0.05	0.04	0.11	1,093
Vendor	0.04	0.02	1.14	0.35	0.01	0.01	0.28	0.29	0.01	0.08	0.09	—	996	996	0.02	0.15	0.07	1,041
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.16	0.20	2.30	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	490	490	0.02	0.02	0.83	497
Vendor	0.02	0.01	0.51	0.15	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	446	446	0.01	0.07	0.55	467
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.04	0.42	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	81.1	81.1	< 0.005	< 0.005	0.14	82.3
Vendor	< 0.005	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	73.8	73.8	< 0.005	0.01	0.09	77.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.35	0.33	5.98	0.00	0.00	1.09	1.09	0.00	0.26	0.26	—	1,149	1,149	0.05	0.04	3.89	1,166
Vendor	0.04	0.02	1.05	0.32	0.01	0.01	0.28	0.29	0.01	0.08	0.09	—	979	979	0.02	0.15	2.68	1,027

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.33	0.36	4.54	0.00	0.00	1.09	1.09	0.00	0.26	0.26	—	1,057	1,057	0.02	0.04	0.10	1,070
Vendor	0.04	0.02	1.09	0.33	0.01	0.01	0.28	0.29	0.01	0.08	0.09	—	980	980	0.02	0.15	0.07	1,025
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.24	0.28	3.39	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	764	764	0.01	0.03	1.20	775
Vendor	0.03	0.01	0.78	0.23	0.01	0.01	0.20	0.21	0.01	0.05	0.06	—	699	699	0.02	0.11	0.82	733
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.62	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	127	127	< 0.005	< 0.005	0.20	128
Vendor	0.01	< 0.005	0.14	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	116	116	< 0.005	0.02	0.14	121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.42	0.58	< 0.005	0.02	—	0.02	0.01	—	0.01	—	108	108	< 0.005	< 0.005	—	108
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.9	17.9	< 0.005	< 0.005	—	17.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.32	0.33	4.18	0.00	0.00	1.09	1.09	0.00	0.26	0.26	—	1,037	1,037	0.01	0.04	0.09	1,050
Vendor	0.04	0.02	1.05	0.32	0.01	0.01	0.28	0.29	0.01	0.08	0.09	—	962	962	0.02	0.14	0.06	1,005
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	47.3	47.3	< 0.005	< 0.005	0.07	47.9
Vendor	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.3	43.3	< 0.005	0.01	0.05	45.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.83	7.83	< 0.005	< 0.005	0.01	7.93
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.16	7.16	< 0.005	< 0.005	0.01	7.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.95	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	145
Paving	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.75	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	187	187	< 0.005	0.01	0.02	189
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.1	18.1	< 0.005	< 0.005	0.03	18.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.00	3.00	< 0.005	< 0.005	< 0.005	3.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	52.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	52.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Architectural Coatings	—	5.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.12	2.12	< 0.005	< 0.005	—	2.13
Architectural Coatings	—	0.92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	1.11	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	226	226	< 0.005	0.01	0.70	229
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.84	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	207	207	< 0.005	0.01	0.02	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	20.1	20.1	< 0.005	< 0.005	0.03	20.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.34	3.34	< 0.005	< 0.005	< 0.005	3.38
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	5.01	4.53	2.79	57.6	0.12	0.05	11.6	11.7	0.05	2.94	2.99	—	11,975	11,975	0.42	0.28	40.8	12,111

Fast Food Restaurant with Drive Thru	14.8	13.3	15.7	150	0.39	0.28	34.4	34.6	0.27	8.72	8.99	—	40,072	40,072	1.36	1.66	140	40,741
Total	19.8	17.8	18.5	207	0.51	0.33	46.0	46.3	0.31	11.7	12.0	—	52,047	52,047	1.78	1.95	181	52,852
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	4.80	4.33	3.10	47.0	0.11	0.05	11.6	11.7	0.05	2.94	2.99	—	11,055	11,055	0.43	0.30	1.06	11,157
Fast Food Restaurant with Drive Thru	14.0	12.5	16.9	123	0.37	0.28	34.4	34.6	0.27	8.72	8.99	—	37,621	37,621	1.40	1.72	3.63	38,172
Total	18.8	16.8	20.0	170	0.48	0.33	46.0	46.3	0.31	11.7	12.0	—	48,676	48,676	1.82	2.02	4.69	49,328
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	0.87	0.78	0.58	8.93	0.02	0.01	2.09	2.10	0.01	0.53	0.54	—	1,852	1,852	0.07	0.05	2.91	1,872
Fast Food Restaurant with Drive Thru	2.07	1.91	1.80	13.3	0.03	0.03	3.08	3.10	0.03	0.78	0.81	—	3,175	3,175	0.15	0.16	4.99	3,231
Total	2.94	2.70	2.38	22.2	0.05	0.04	5.17	5.21	0.03	1.31	1.34	—	5,027	5,027	0.22	0.21	7.90	5,104

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	1,706	1,706	0.16	0.02	—	1,716
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	346	346	0.03	< 0.005	—	348
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,053	2,053	0.20	0.02	—	2,065
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	1,706	1,706	0.16	0.02	—	1,716
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	346	346	0.03	< 0.005	—	348
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,053	2,053	0.20	0.02	—	2,065
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	282	282	0.03	< 0.005	—	284
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	57.3	57.3	0.01	< 0.005	—	57.7
Total	—	—	—	—	—	—	—	—	—	—	—	—	340	340	0.03	< 0.005	—	342

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	0.24	0.12	2.17	1.82	0.01	0.16	—	0.16	0.16	—	0.16	—	2,588	2,588	0.23	< 0.005	—	2,595
Fast Food Restaurant with Drive Thru	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	380	380	0.03	< 0.005	—	381
Total	0.27	0.14	2.49	2.09	0.01	0.19	—	0.19	0.19	—	0.19	—	2,968	2,968	0.26	0.01	—	2,976
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	0.24	0.12	2.17	1.82	0.01	0.16	—	0.16	0.16	—	0.16	—	2,588	2,588	0.23	< 0.005	—	2,595
Fast Food Restaurant with Drive Thru	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	380	380	0.03	< 0.005	—	381
Total	0.27	0.14	2.49	2.09	0.01	0.19	—	0.19	0.19	—	0.19	—	2,968	2,968	0.26	0.01	—	2,976
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	0.04	0.02	0.40	0.33	< 0.005	0.03	—	0.03	0.03	—	0.03	—	428	428	0.04	< 0.005	—	430
Fast Food Restaurant with Drive Thru	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	62.9	62.9	0.01	< 0.005	—	63.1
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	491	491	0.04	< 0.005	—	493

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.53	1.42	0.07	8.63	< 0.005	0.02	—	0.02	0.01	—	0.01	—	35.5	35.5	< 0.005	< 0.005	—	35.6
Total	1.53	6.17	0.07	8.63	< 0.005	0.02	—	0.02	0.01	—	0.01	—	35.5	35.5	< 0.005	< 0.005	—	35.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	4.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.19	0.18	0.01	1.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.02	4.02	< 0.005	< 0.005	—	4.04
Total	0.19	1.04	0.01	1.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.02	4.02	< 0.005	< 0.005	—	4.04

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	83.3	292	375	8.57	0.21	—	651
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	6.05	20.4	26.4	0.62	0.01	—	46.4
Total	—	—	—	—	—	—	—	—	—	—	—	89.4	312	401	9.19	0.22	—	697
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	83.3	292	375	8.57	0.21	—	651
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	6.05	20.4	26.4	0.62	0.01	—	46.4

Total	—	—	—	—	—	—	—	—	—	—	—	89.4	312	401	9.19	0.22	—	697
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	13.8	48.3	62.1	1.42	0.03	—	108
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	1.00	3.37	4.38	0.10	< 0.005	—	7.69
Total	—	—	—	—	—	—	—	—	—	—	—	14.8	51.7	66.5	1.52	0.04	—	115

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	126	0.00	126	12.6	0.00	—	440
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	64.6	0.00	64.6	6.45	0.00	—	226
Total	—	—	—	—	—	—	—	—	—	—	—	190	0.00	190	19.0	0.00	—	665
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	126	0.00	126	12.6	0.00	—	440

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	64.6	0.00	64.6	6.45	0.00	—	226
Total	—	—	—	—	—	—	—	—	—	—	—	190	0.00	190	19.0	0.00	—	665
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	20.8	0.00	20.8	2.08	0.00	—	72.8
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	10.7	0.00	10.7	1.07	0.00	—	37.4
Total	—	—	—	—	—	—	—	—	—	—	—	31.5	0.00	31.5	3.15	0.00	—	110

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	48.9	48.9
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.3	16.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65.2	65.2

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	48.9	48.9
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.3	16.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65.2	65.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.10	8.10
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.69	2.69
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.8	10.8

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	1/1/2025	2/12/2025	5.00	30.0	—
Site Preparation	Site Preparation	2/13/2025	3/13/2025	5.00	20.0	—

Grading	Grading	3/14/2025	5/16/2025	5.00	45.0	—
Building Construction	Building Construction	5/17/2025	1/23/2027	5.00	440	—
Paving	Paving	1/24/2027	3/14/2027	5.00	35.0	—
Architectural Coating	Architectural Coating	3/15/2027	5/3/2027	5.00	35.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42

Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	42.2	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	58.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	83.3	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	32.5	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT

Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	16.7	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	297,600	99,200	—

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	0.00	0.00	0.00	110,070	—
Site Preparation	—	—	30.0	0.00	—

Grading	—	21,000	135	0.00	—
Paving	0.00	0.00	0.00	0.00	9.85

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Manufacturing	9.85	100%
Fast Food Restaurant with Drive Thru	0.00	0%
Fast Food Restaurant with Drive Thru	0.00	0%
Fast Food Restaurant with Drive Thru	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Manufacturing	1,006	1,006	1,006	367,117	16,719	16,719	16,719	6,102,579
Fast Food Restaurant with Drive Thru	247	247	247	90,152	1,219	4,106	4,106	745,933
Fast Food Restaurant with Drive Thru	970	970	970	354,050	4,787	16,124	16,124	2,929,456
Fast Food Restaurant with Drive Thru	1,700	1,700	1,700	620,500	8,389	28,259	28,259	5,134,098

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	297,600	99,200	—

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Manufacturing	1,798,985	346	0.0330	0.0040	8,074,661
Fast Food Restaurant with Drive Thru	101,833	346	0.0330	0.0040	330,771
Fast Food Restaurant with Drive Thru	87,787	346	0.0330	0.0040	285,147
Fast Food Restaurant with Drive Thru	175,575	346	0.0330	0.0040	570,294

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Manufacturing	43,475,000	2,195,762
Fast Food Restaurant with Drive Thru	880,248	0.00
Fast Food Restaurant with Drive Thru	758,834	0.00
Fast Food Restaurant with Drive Thru	1,517,669	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Manufacturing	233	—
Fast Food Restaurant with Drive Thru	33.4	—
Fast Food Restaurant with Drive Thru	28.8	—
Fast Food Restaurant with Drive Thru	57.6	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Manufacturing	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

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	24.7	annual days of extreme heat
Extreme Precipitation	2.75	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	36.5	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	80.0
AQ-PM	67.8
AQ-DPM	67.6
Drinking Water	84.6
Lead Risk Housing	0.21
Pesticides	0.00
Toxic Releases	57.5
Traffic	98.0
Effect Indicators	—
CleanUp Sites	20.5
Groundwater	22.1
Haz Waste Facilities/Generators	53.5
Impaired Water Bodies	0.00
Solid Waste	35.7
Sensitive Population	—
Asthma	14.2
Cardio-vascular	59.5
Low Birth Weights	7.95
Socioeconomic Factor Indicators	—
Education	34.4
Housing	27.2
Linguistic	23.8
Poverty	28.4
Unemployment	9.72

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	67.39381496
Employed	33.54292314
Median HI	59.36096497
Education	—
Bachelor's or higher	53.83036058
High school enrollment	13.01167715
Preschool enrollment	41.57577313
Transportation	—
Auto Access	98.98626973
Active commuting	56.40959836
Social	—
2-parent households	63.9291672
Voting	60.6698319
Neighborhood	—
Alcohol availability	87.60426023
Park access	6.403182343
Retail density	25.70255357
Supermarket access	32.86282561
Tree canopy	17.84935198
Housing	—
Homeownership	93.09636854
Housing habitability	80.67496471
Low-inc homeowner severe housing cost burden	10.29128705

Low-inc renter severe housing cost burden	92.26228667
Uncrowded housing	79.21211344
Health Outcomes	—
Insured adults	46.18247145
Arthritis	65.9
Asthma ER Admissions	75.3
High Blood Pressure	69.1
Cancer (excluding skin)	57.8
Asthma	37.3
Coronary Heart Disease	83.6
Chronic Obstructive Pulmonary Disease	56.7
Diagnosed Diabetes	84.4
Life Expectancy at Birth	65.8
Cognitively Disabled	70.6
Physically Disabled	95.1
Heart Attack ER Admissions	34.7
Mental Health Not Good	44.5
Chronic Kidney Disease	85.5
Obesity	38.6
Pedestrian Injuries	44.2
Physical Health Not Good	59.3
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	18.0
Current Smoker	31.7
No Leisure Time for Physical Activity	53.7
Climate Change Exposures	—

Wildfire Risk	20.0
SLR Inundation Area	0.0
Children	81.0
Elderly	17.9
English Speaking	75.7
Foreign-born	45.7
Outdoor Workers	53.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	75.6
Traffic Density	86.0
Traffic Access	23.0
Other Indices	—
Hardship	52.3
Other Decision Support	—
2016 Voting	67.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	26.0
Healthy Places Index Score for Project Location (b)	51.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	188,000 sf manufacturing 2,900 sf fast food w/drive through 2,500 sf coffee shop w/drive through 5,000 sf restaurant w/ drive through
Construction: Paving	9.85 acres paved
Operations: Vehicle Data	Trip rates obtained from LLG Scoping Agreement
Operations: Fleet Mix	Truck percentages modified based on LLG Scoping Agreement