RECON

Air Quality Analysis for the Southwest Village Specific Plan San Diego, California PRJ-0614791

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Acronyms and Abbreviations

$\mu g/m^3$	micrograms per cubic meter
°F	degrees Fahrenheit
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
APCD	Air Pollution Control District
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City	City of San Diego
CO	carbon monoxide
CO Protocol	California Department of Transportation Project-Level Carbon Monoxide Protocol
DPM	diesel particulate matter
EIR	Environmental Impact Report
EVA	emergency vehicle access
FEIR	Final Environmental Impact Report
HQ	hazard quotient
HRA	Health Risk Assessment
LOS	Level of Service
mg/kg/d	milligrams per kilogram body weight per day
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
OEHHA	Office of Environmental Health Hazard Assessment
OMCP	Otay Mesa Community Plan
Pb	lead
PM_{10}	particulate matter with an aerodynamic diameter of 10 microns or less
$PM_{2.5}$	particulate matter with an aerodynamic diameter of 2.5 microns or less
ppb	parts per billion
ppm	parts per million
RAQS	Regional Air Quality Strategy
RCEM	Roadway Construction Emissions Model
ROG	reactive organic gas
SANDAG	San Diego Association of Governments
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide

Specific Plan	Southwest Village Specific Plan
SR-905	State Route 905
TACs	toxic air contaminants
TCM	Transportation Control Measures
U.S. EPA	United States Environmental Protection Agency
USC	United States Code
VTM	Vesting Tentative Map

Executive Summary

The purpose of this report is to assess potential short-term and long-term local and regional air quality impacts resulting from development of the proposed Southwest Village Specific Plan (Specific Plan), and the proposed Vesting Tentative Map (VTM). This report includes a project-level analysis of certain components necessary for the VTM development, and a program-level analysis of the remainder Specific Plan components. The project-level analysis addresses Phase 1 grading and construction and associated infrastructure, as well as Phase 2 and a portion of Phase 4 rough grading, and drainage. The program-level analysis addresses implementation of the remaining Specific Plan development areas (Phases 3, a portion of Phase 4, and Phases 5 through 7) in addition to project construction and associated infrastructure improvements within Phase 2 and construction of the southeastern sewer lift station. As future development is proposed within the program-level analysis areas, future project-specific impact analysis would be required.

Program-level Analysis

The Specific Plan boundary encompasses approximately 490 acres, would allow up to 5,130 attached and detached residences, and would facilitate creation of a new village anchored by up to 175,000 square feet of commercial and retail uses in a Mixed-Use Village Core. The Specific Plan would provide public facilities including dedication of a new elementary school, developed parks in addition to trails, natural open space, and habitat conservation.

The primary goal of the San Diego Air Pollution Control District's Regional Air Quality Strategy (RAQS) is to reduce ozone precursor emissions. The Final Environmental Impact Report (FEIR) prepared for the Otay Mesa Community Plan (OMCP) (City of San Diego 2013) determined that development occurring as a result of implementing the OMCP would not obstruct or conflict with the implementation of the San Diego RAQS or applicable portion of the State Implementation Plan (SIP), as the changes in land uses under the OMCP and the traffic generated would result in fewer emissions than the previously adopted community plan upon which the RAQS was based, resulting in a less than significant impact. The Specific Plan would decrease the number of residential units, park space, and commercial uses and provide the same amount of school space. Overall, the Specific Plan would slightly decrease the development potential in the Specific Plan area. As a result, operational emissions associated with the Specific Plan would be less than those associated with the adopted land uses for all criteria pollutants. Thus, because implementation of the Specific Plan land uses would not result in an effective increase in operational emissions, the Specific Plan would be consistent with assumptions contained in the RAQS. Therefore, the Specific Plan, including the VTM and related project-level components, would not obstruct or conflict with implementation of the RAQS, and impacts would be less than significant.

Buildout of the Specific Plan area is assumed to occur over an 11-year period. Construction emissions associated with buildout of the Specific Plan are not anticipated to exceed the applicable regional emissions thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. Therefore, as project construction emissions would be below these limits, project construction would not result in regional emissions that would exceed the National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) or contribute to existing violations.

While it is not anticipated that construction emissions would exceed the applicable thresholds based on the assumed timeframe, the exact construction schedule and timing details are not known for future development implemented under the Specific Plan. Therefore, OMCP FEIR Mitigation Framework AQ-1 would be carried forward for future Specific Plan development. The OMCP FEIR provides the following Mitigation Framework AQ-1 for projects that would result in construction emissions that exceed the applicable thresholds.

AQ-1: For projects that would exceed daily construction emissions thresholds established by the City, best available control measures/technology shall be incorporated to reduce construction emissions to below daily emission standards established by the City. Best available control measures/technology shall include:

a. Minimizing simultaneous operation of multiple pieces of construction equipment;

b. Use of more efficient, or low pollutant emitting, equipment, e.g., Tier III or IV rated equipment;

c. Use of alternative fueled construction equipment;

d. Dust control measures for construction sites to minimize fugitive dust, e.g., watering, soil stabilizers, and speed limits; and

e. Minimizing idling time by construction vehicles.

At a program-level of review, it is not known if implementation of the OMCP FEIR Mitigation Framework AQ-1 would reduce emissions to a level that is less than significant. As with the OMCP FEIR, impacts associated with Specific Plan construction emissions would remain significant and unavoidable.

Long-term emissions of regional air pollutants occur from operational sources. As calculated in this analysis, total operational emissions associated with buildout of the Specific Plan would exceed the project-level significance thresholds for reactive organic gas, carbon monoxide, and particulate matter with an aerodynamic diameter of 10 microns or less. Therefore, new development within the Specific Plan would result in operational emissions that could create emission levels that would exceed state and federal air quality standards and constitute a significant impact. The OMCP FEIR identifies Mitigation Framework AQ-2 for projects that would result in operational emissions that exceed the applicable thresholds.

AQ-2: Development that would significantly impact air quality, either individually or cumulatively, shall receive entitlement only if it is conditioned with all reasonable mitigation to avoid, minimize, or offset the impact. As a part of this process, future projects shall be required to buffer sensitive receptors from air pollution sources through the use of landscaping, open space, and other separation techniques.

At a program level of review, it is not known if implementation of OMCP FEIR Mitigation Framework AQ-2 would reduce emissions to a level that is less than significant. As with the OMCP FEIR, impacts associated with Specific Plan operational emissions would remain significant and unavoidable.

Sensitive receptors near the project site include existing residential uses and a school to the north. Additionally, as development within the Specific Plan area is phased, the project would construct residential and school uses that could be occupied as construction activities in the Specific Plan continue. Should the Specific Plan include a gas station of dry cleaners, the Specific Plan would implement OMCP FEIR Mitigation Framework AQ-3 and AQ-4 which would require an analysis demonstrating that the facility would not expose sensitive receptors to substantial pollutant concentrations:

AQ-3: Prior to the issuance of building permits for any new facility that would have the potential to emit toxic air contaminants, in accordance with Assembly Bill 2588, an emissions inventory and health risk assessment shall be prepared. If adverse health impacts exceeding public notification levels (cancer risk equal to or greater than 10 in 1,000,000; see Section 5.3.5.1 [b and c]) are identified, the facility shall provide public notice to residents located within the public notification area and submit a risk reduction audit and plan to the Air Pollution Control District (APCD) that demonstrates how the facility would reduce health risks to less than significant levels within five years of the date the plan.

AQ-4: Prior to the issuance of building permits for any project containing a facility identified in Table 5.3-7 [of the FEIR], or locating air quality sensitive receptors closer than the recommended buffer distances, future projects implemented in accordance with the CPU shall be required to prepare a health risk assessment (HRA) with a Tier I analysis in accordance with APCD HRA Guidelines and the Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics "Hot Spots" Program Risk Assessment Guidelines (San Diego Air Pollution Control District [SDAPCD] 2006; OEHHA 2003).

All HRAs shall include:

1. The estimated maximum 70-year lifetime cancer risk;
2. The estimated maximum non-cancer chronic health hazard index; and
3. The estimated maximum non-cancer acute health hazard index.

Risk estimates shall each be made for the off-site point of maximum health impact (PMI), the maximally exposed individual resident (MEIR), and the maximally exposed individual worker (MEIW). The location of each of these receptors shall be specified. The lifetime cancer risk, non-cancer chronic and acute health hazard indexes for nearby sensitive receptors shall also be reported. Cancer and non-cancer chronic risk estimates shall be based on inhalation risks. HRAs shall include estimates of population exposure, including cancer burden, as well as cancer and non-cancer chronic and acute risk isopleths (contours). The HRA shall identify best available control technology required to reduce risk to less than 10 in 1,000,000.

While the OMCP FEIR Mitigation Framework would reduce the potential impacts associated with exposure to air toxics, specific projects or improvements are not proposed within program-level portions of the Specific Plan area; therefore, it cannot be determined whether the OMCP FEIR Mitigation Framework would reduce all impacts to below a level of significance. Therefore, as with the OMCP FEIR, impacts related to exposure to air toxics would be significant and unavoidable.

Specific Plan construction would result in the generation of diesel particulate matter emissions from the use of off-road diesel construction equipment required for site grading and earthmoving, trenching, asphalt paving, and other construction activities. As calculated in this analysis, the excess cancer risk would be less than the screening threshold of 10 in one million, Specific Plan impacts to sensitive receptors from exposure to construction-related diesel particulate matter would be less than significant.

The Specific Plan does not include heavy industrial or agricultural uses that are typically associated with odor complaints. The proposed sewer lift stations would include odor control systems and scrubber fans that would reduce odors. Odor impacts would be less than significant.

Project-level Analysis

Several entitlements including, but not limited to, a Vesting Tentative Map (VTM), Site Development Permit, and Multi-Habitat Planning Area Boundary Adjustment are requested in order to develop approximately 74 acres within Phase 1 (Planning Areas 8 through 14) to implement a portion of the residential components of the Specific Plan. Phase 1 would include up to 920 residential units, including 142 detached multi-family units (under 20 dwelling units per acre), 498 multi-family attached units (under 20 dwelling units per acre), and 280 multi-family attached units (over 20 dwelling units per acre). The multi-family detached units assumed are conservatively calculated as single-family units for purposes of this analysis since single-family air emissions assumptions are higher than assumptions for multi-family due to larger unit size. The environmental analysis assumes 920 units as a conservative unit count as the number of residential units is refined through the planning process including 142 multi-family detached units evaluated as single-family, and 778 multi-family attached units.

Project-components evaluated at the project-level include construction and operational emissions associated with buildout of Planning Areas 8 through 14, the Beyer Boulevard extension, in addition to water, sewer and transportation improvements. Two temporary sewer pump stations would be constructed with Phase 1 to serve the initial residential units within Planning Areas 8 through 10, until such time that the permanent water and sewer lines are constructed within Beyer Boulevard. Construction, operational, and odor impacts associated with this temporary sewer pump station is evaluated. The project-level analysis additionally addresses rough grading within Phase 2 (Planning Areas 15 to 18) in order to provide balanced cut and fill grading quantities, and Phase 4 (portions of Planning Areas 1, 2, and 7) for the construction of roadways as well as future residential development.

Operational air emissions generated from implementation of the project-level components are a component of the overall Specific Plan emissions as the vast majority of emissions are associated with vehicle trips. As discussed, operational emissions associated with the Specific Plan would be less than those associated with the adopted land uses for all criteria pollutants. Thus, because the land use changes associated with the Specific Plan would not result in an effective increase in operational emissions, the Specific Plan would be consistent with assumptions contained in the RAQS. Therefore, implementation of the Specific Plan, including the project-level components, would not obstruct or conflict with implementation of the RAQS, and impacts would be less than significant.

Construction emissions associated with buildout of the project-level components were calculated and emissions would not exceed the applicable regional emissions thresholds. Therefore, construction of project-level components would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations.

Total operational emissions associated with buildout of Planning Areas 8 through 14, which includes anticipated operational emissions associated with Beyer Boulevard, would not exceed the applicable regional emissions thresholds. Therefore, as project operation emissions would be below these limits, project operation would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations. Therefore, the project-level components would result in a less than significant impact.

Further, as with the Specific Plan, the project-level components would not expose sensitive receptors to substantial pollutant concentrations or generate odors that would affect a substantial number of people. The proposed temporary sewer lift station within Phase 1 would include odor control systems and scrubber fans that would reduce odors. Odor impacts would be less than significant. All air quality impacts associated with the project-level components would be less than significant.

1.0 Introduction

The purpose of this report is to assess potential short-term and long-term local and regional air quality impacts resulting from development of the proposed Southwest Village Specific Plan (Specific Plan), and Vesting Tentative Map (VTM) 2188969, in addition to other related project-level components.

Air pollution affects all southern Californians. Effects can include increased respiratory infections, increased discomfort, missed days from work and school, and increased mortality. Polluted air also damages agriculture and our natural environment.

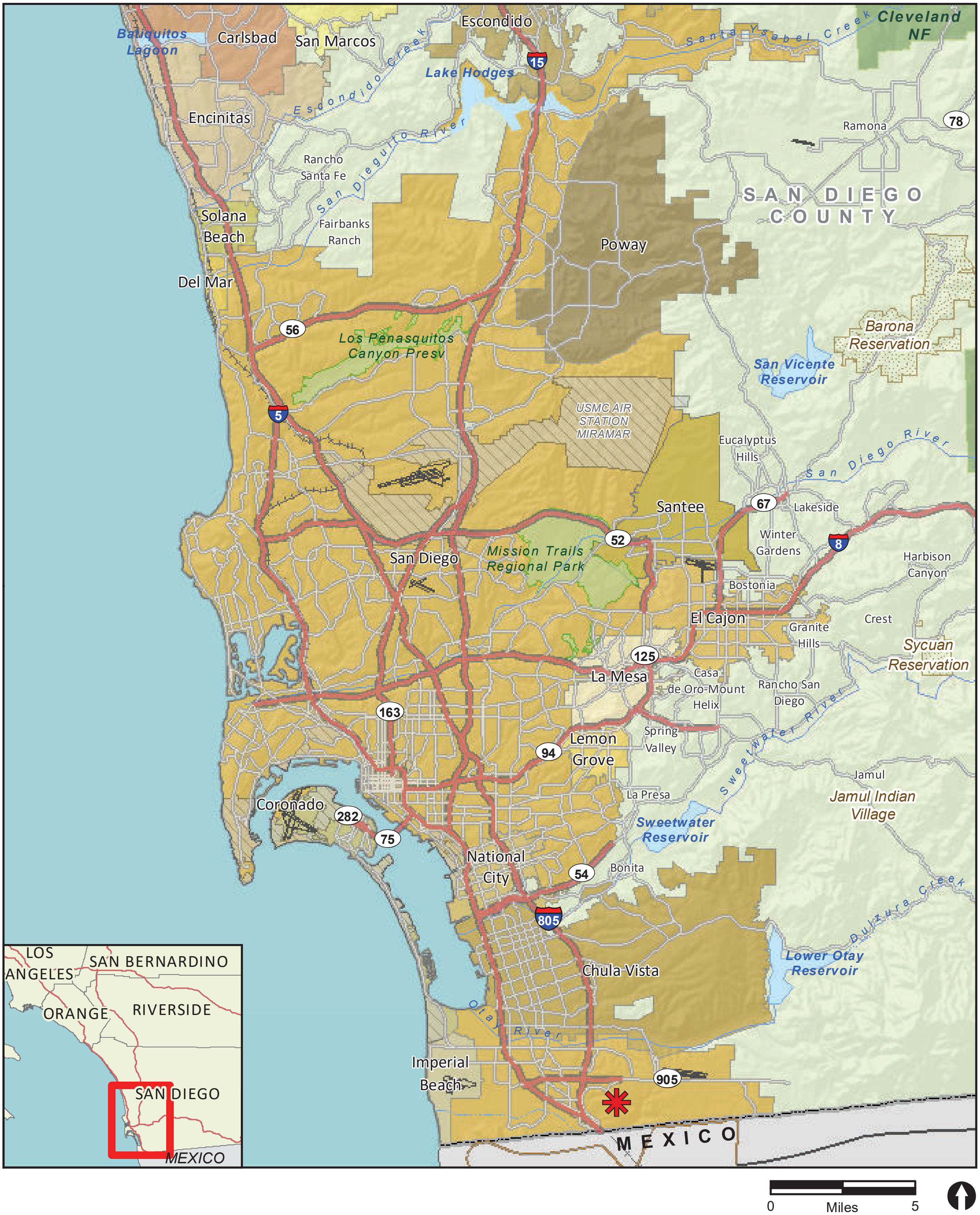
The state of California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality. The project site is located within the San Diego Air Basin (SDAB). The SDAB is currently classified as a federal non-attainment area for ozone, and a state non-attainment area for particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}), particulate matter with an aerodynamic diameter of 10 microns or less ($PM_{2.5}$), and ozone.

Air quality impacts can result from the construction and operation of the project. Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional impacts resulting from growth-inducing development, or local hot-spot effects stemming from sensitive receivers being placed close to highly congested roadways. In the case of this project, operational impacts would be primarily due to emissions to the basin from mobile sources associated with vehicular travel along the roadways within the project area.

The analysis of impacts is based on federal and state Ambient Air Quality Standards and is assessed in accordance with the guidelines, policies, and standards established by the City of San Diego (City) and the San Diego Air Pollution Control District (SDAPCD). Project compatibility with the adopted air quality plan for the area is also assessed. Measures are recommended, as required, to reduce potentially significant impacts.

2.0 Project Description

The Specific Plan provides a comprehensive policy framework intended to guide future development in Southwest Village, consistent with the Otay Mesa Community Plan (OMCP) and City of Villages Strategy. The Specific Plan boundary encompasses approximately 490 acres, would allow up to 5,130 attached and detached residences, and would facilitate creation of a new village anchored by up to 175,000 square feet of commercial and retail uses in a Mixed-Use Village Core. The Specific Plan would provide public facilities including dedication of a new elementary school, developed parks in addition to trails, natural open space and habitat conservation. Access to the Specific Plan area would be via two main access points, Caliente Avenue to the north and from an extension of Beyer Boulevard, connecting the Specific Plan area to San Ysidro. Figure 1 shows the regional location, and Figure 2 shows an aerial photograph of the project area.



Project Location

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FIGURE 1
Regional Location

Image Source: NearMap (Flown January 2024)

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FIGURE 2
Project Location on Aerial Photograph

The Specific Plan identifies a range of allowable residential densities for each planning area to allow for flexibility in future planning and design. Figure 3 shows the Specific Plan development concept. The following land use designations are proposed:

- Medium-Low Density Residential allowing 8 to 22 dwelling units per acre
- Medium Density Residential allowing 15 to 29 dwelling units per acre
- High Density Residential allowing 20 to 44 dwelling units per acre
- Mixed-Use allowing up to 175,000 square feet of commercial and retail uses at a maximum Floor Area Ratio of 3.0 and multi-family attached residential units at a density range of 20 to 44 dwelling units per acre

Implementation of the Specific Plan would require a number of discretionary approvals including but not limited to an amendment to the OMCP to remove the Neighborhood Village designation and designate Specific Plan land uses and circulation changes, a rezone to implement Specific Plan land uses, and a Multi-Habitat Planning Area Boundary Adjustment.

For the purpose of the environmental analysis included in this report, a full buildout scenario for Specific Plan was analyzed. As the Specific Plan is under multiple property ownerships and the timing of buildout is not known at this time, the ultimate mix of residential densities cannot be known with certainty. However, the following assumptions consistent with the Specific Plan land use framework were used in the environmental analysis that identifies buildout of up to:

- 1,424 single-family residential units
- 2,234 multi-family units under 20 dwelling units per acre
- 1,472 multi-family units over 20 dwelling units per acre
- 175,000 square feet of commercial/retail

The Specific Plan would be implemented in phases as detailed in Figure 4. The Planning Area phasing represented in Figure 4 is conceptual and implementation may occur in any order provided services are provided concurrent with development. This air quality report analyzes implementation of the Specific Plan at a program-level considering build-out of all future phases of the Specific Plan. Anticipated grading phasing is also identified, as shown in Figure 5.

2.1 Program-level Components

Program-level components of the Specific Plan would involve future site-specific tentative maps and grading plans to be processed within Planning Areas 1 through 5 and 15 through 27 (see Figure 4). As future Planning Areas are built, improvements would be constructed concurrently including but not limited to internal roadways, parks, water and sewer lines, and trail alignments (see Figure 6 for the proposed trail network). Two permanent sewer pump stations would ultimately be required within the program-level area, including one in the southeastern portion of the Specific Plan area (Planning Area 30) and a second pump station within the southern tip of Planning Area 5 (see Figure 7 for the anticipated location of permanent sewer lift stations). While the project-level rough grading accounts for grading within Phase 2 Planning Areas and the future permanent sewer pump station area in Planning Area 30, operational and odor emissions are evaluated at the program-level for both permanent sewer-lift stations, since specific designs for the pump stations are not available at this time.

Map Source: Placeworks

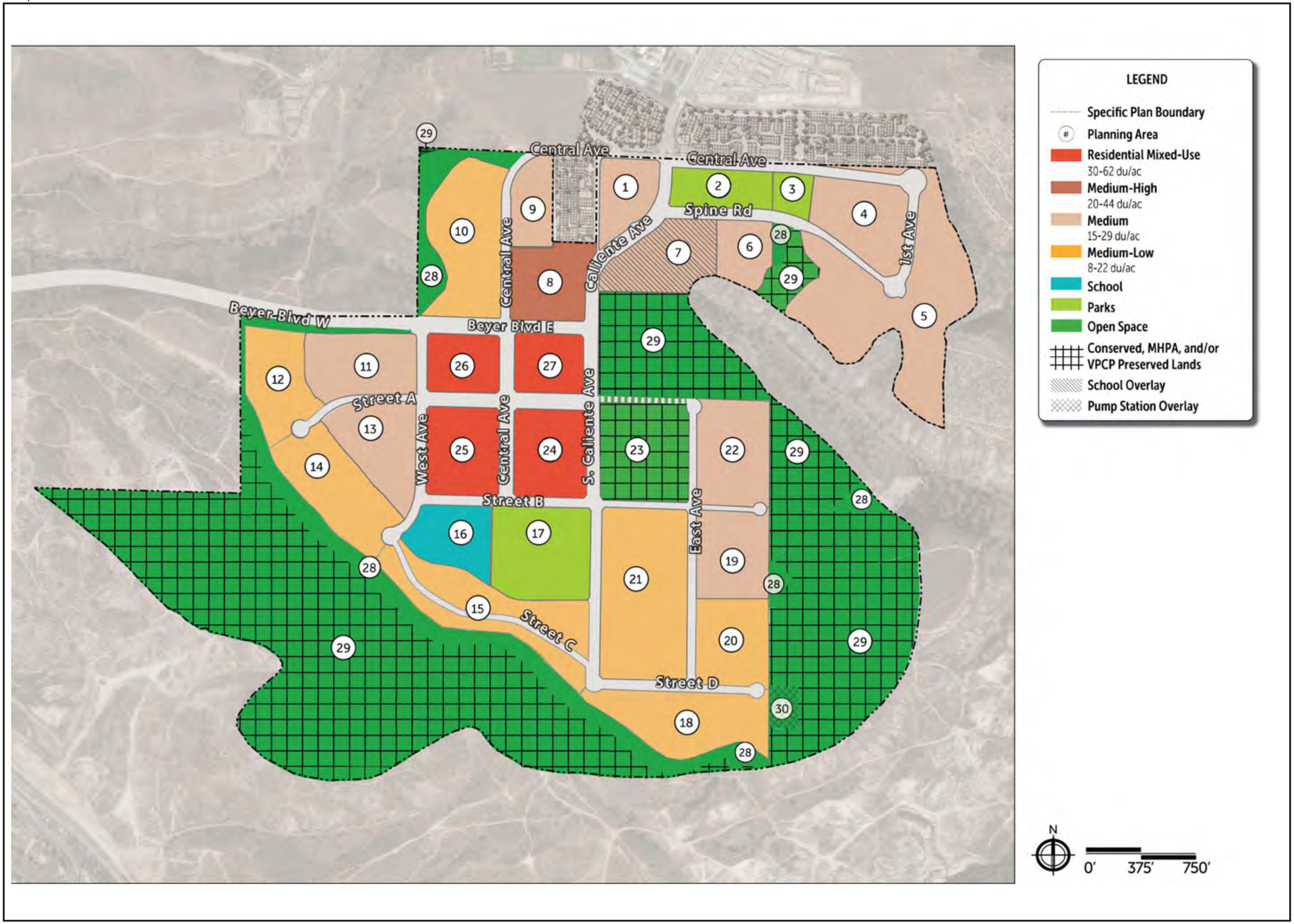

FIGURE 3
Specific Plan Development Concept

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Map Source: Placeworks

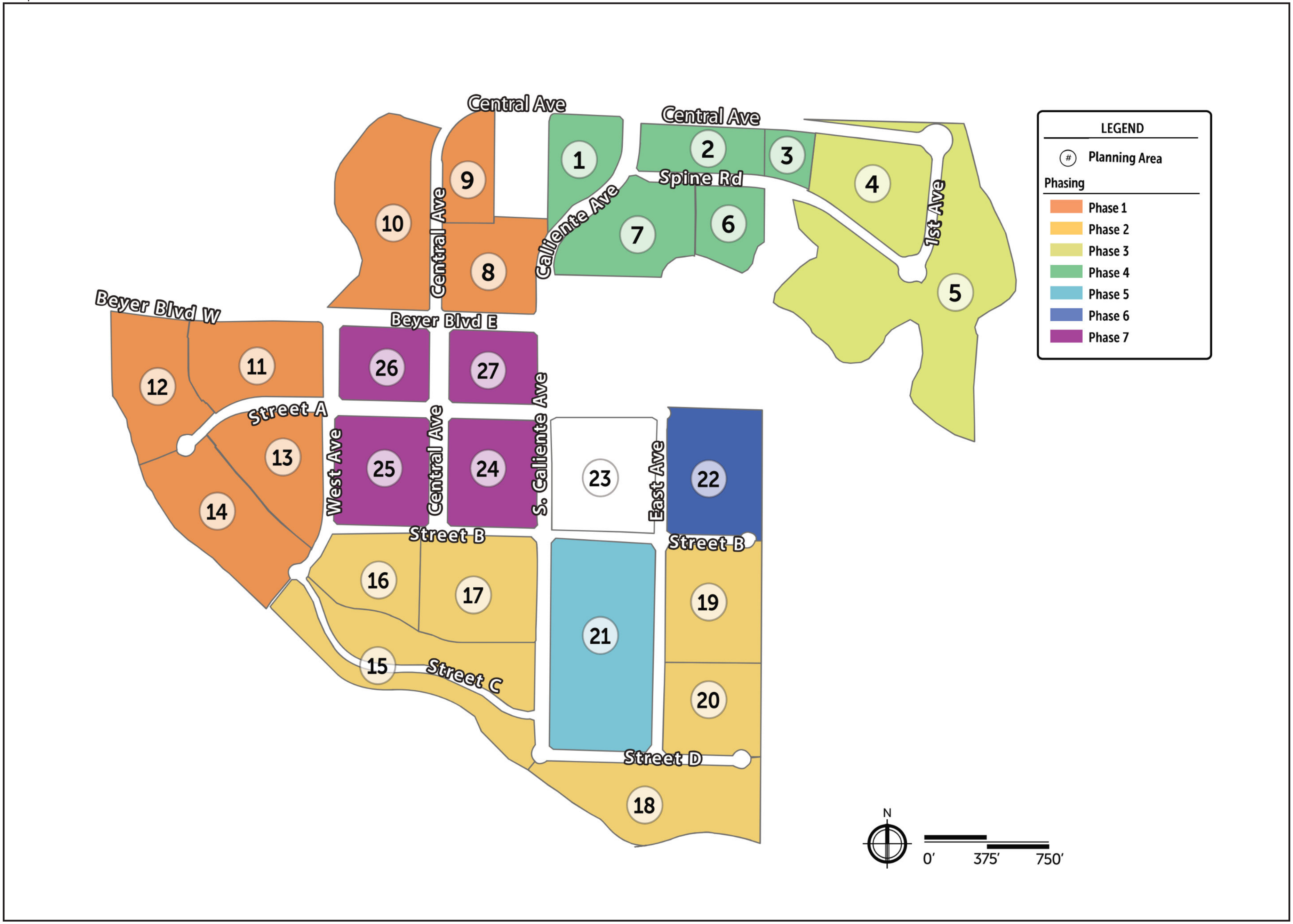

FIGURE 4

Specific Plan Development Phasing

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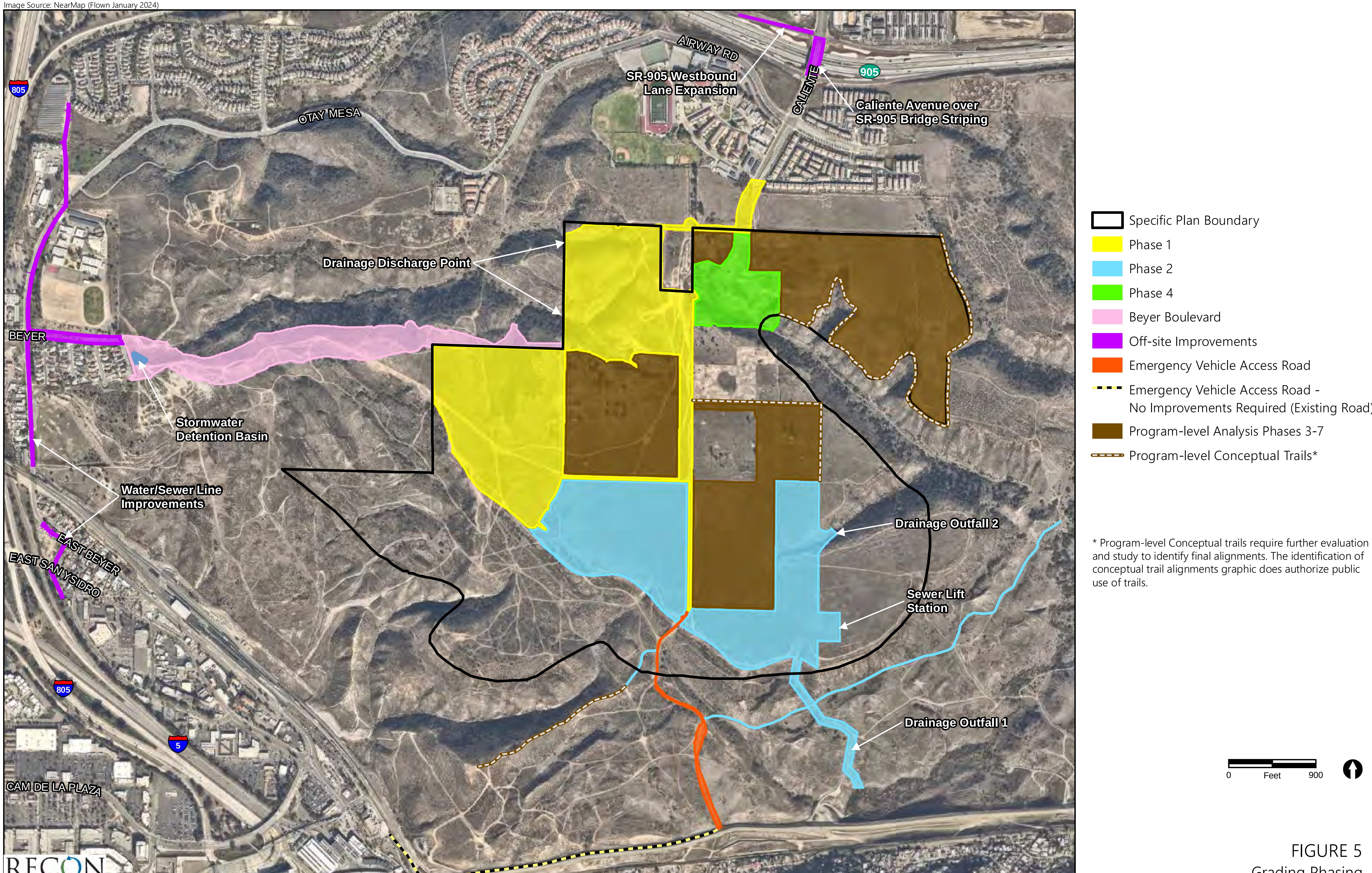
Image Source: NearMap (Flown January 2024)



* Program-level Conceptual trails require further evaluation and study to identify final alignments. The identification of conceptual trail alignments graphic does authorize public use of trails.

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FIGURE 5
Grading Phasing

Image Source: NearMap (Flown January 2024)

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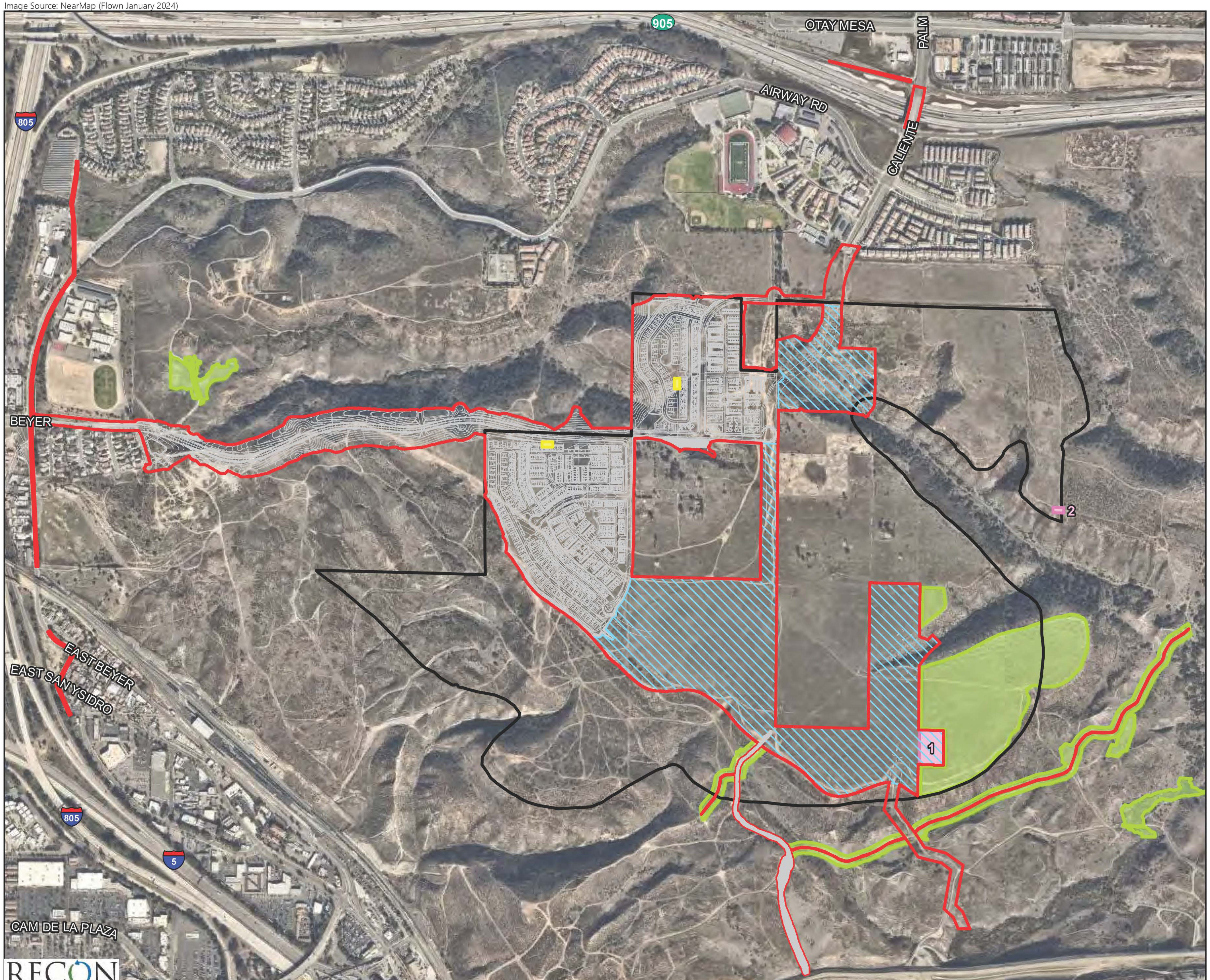
FIGURE 6
Trail Network

Image Source: NearMap (Flown January 2024)



Project-level Analysis Grading Footprint
Project-level Analysis - Construction and Operational
Project-level Analysis - Rough Grading Only
Permanent Sewer Lift Station
Temporary Sewer Lift Station
Specific Plan Boundary
Habitat Restoration Areas

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FIGURE 7
Project-level Analysis Area

As future projects come forward within the program-level area, they would require additional environmental review and project specific air quality analysis to identify project-specific construction and operational air quality and odor impacts and propose project-specific mitigation. The program-level analysis herein is intended to address potential air quality impacts at the program-level based development of future program-level Planning Areas, in addition to identifying a mitigation framework for the future development consistent with the OMCP Final Environmental Impact Report (FEIR).

2.2 Project-level Components

A VTM, Site Development Permit, and Multi-Habitat Planning Area Boundary Adjustment is requested in order to develop approximately 61 acres within Planning Areas 8 through 14 to implement a portion of the residential components of the Specific Plan.

Components of the Specific Plan evaluated at the project level for air quality are depicted on Figure 7 and include construction and operation of Phase 1 of the residential development (Planning Areas 8 through 14) in addition to infrastructure improvements, grading, trail improvements, landscaping and restoration, and other project design features. Implementation of the project-level components is detailed below.

2.2.1 Residential Components

The residential components evaluated at the project level include construction and operation of Phase 1, which includes Planning Areas 8 through 14. These Planning Areas are addressed in the VTM, which identifies up to 920 residential dwelling units, including 142 multi-family detached units (under 20 dwelling units per acre), 498 multi-family attached units (under 20 dwelling units per acre), and 280 multi-family attached units (over 20 dwelling units per acre). The multi-family detached units assumed are conservatively calculated as single-family units for purposes of this analysis since single-family air emissions assumptions are higher than assumptions for multi-family due to larger unit size. Implementation of residential components would occur in phases as detailed below.

2.2.1.1 Phase 1a

Phase 1a would involve construction of access to the Specific Plan area via Caliente Avenue and Central Avenue in addition to construction of the first 200 residential units. The anticipated site plan for Phase 1a is depicted on Figure 8. The Caliente Avenue extension south of its existing terminus to Central Avenue may be constructed by another developer or this project; therefore, this access is included as part of the project description in the event this project proceeds first. Phase 1a would involve construction of the first 200 residential units within Planning Areas 8 through 10 in addition to a temporary sewer lift station as depicted on Figure 8. Due to the area topography in relation to sewer treatment, a temporary sewer pump station would be required to serve these first 200 units until such time permanent sewer and water lines are constructed.

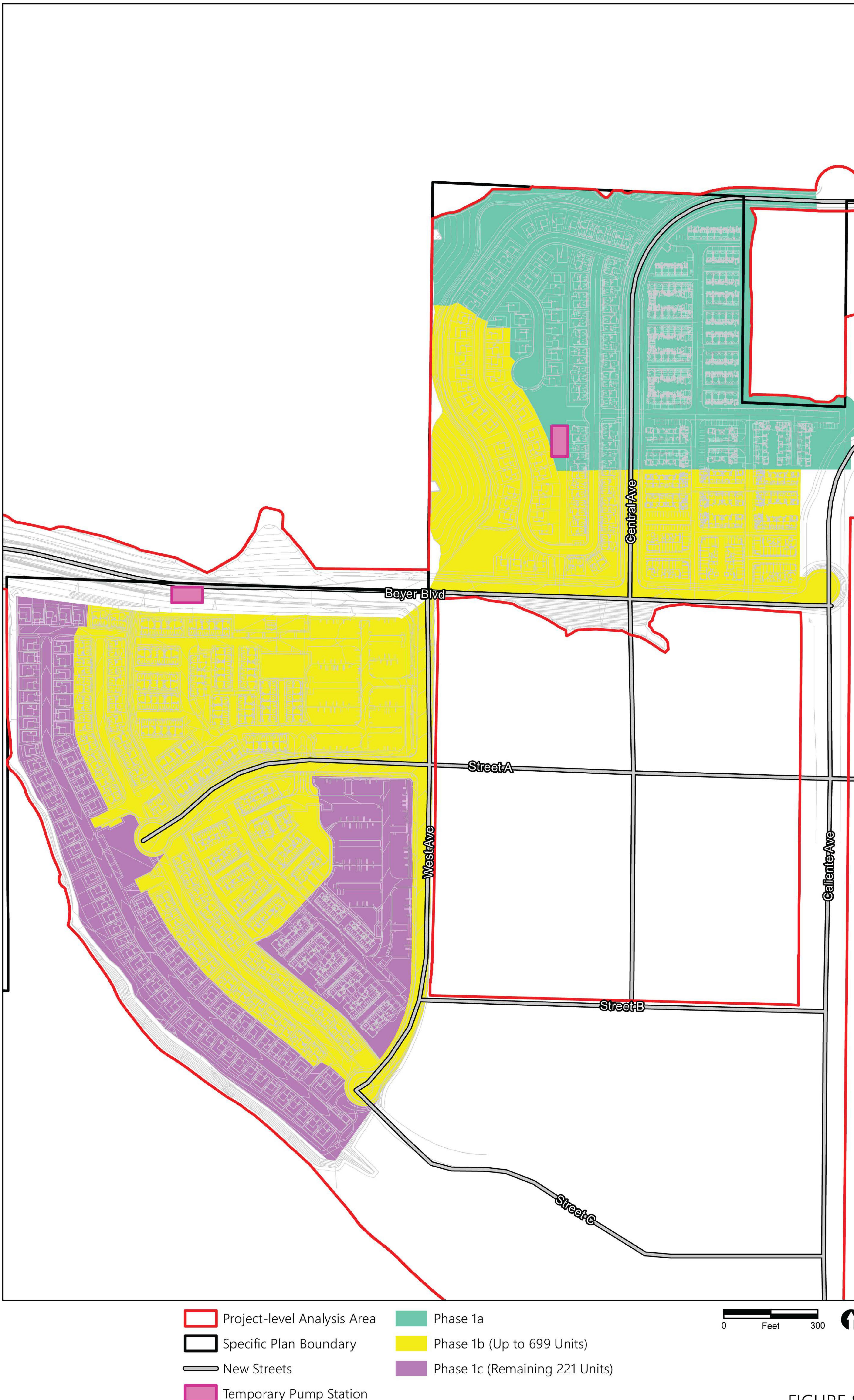

FIGURE 8
Phase 1

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2.2.1.2 Phase 1b

Phase 1b would involve construction of up to an additional 499 units for a total of 699 residential units. The anticipated site plan for this phase is depicted on Figure 8. As part of this phase, an emergency only vehicle access (EVA) road would be improved to provide an EVA road for residents. Refer to Section 2.2.2.1.e. for additional details about the EVA road. Phase 1b would also require the construction of a temporary sewer lift station as depicted in Figure 8.

2.2.1.3 Phase 1c

Phase 1c would involve construction of the Beyer Boulevard extension in addition to the remaining 221 residential units within Planning Areas 8 through 14. Internal to the Specific Plan, implementation of the project-level areas would include construction of internal streets within Planning Areas 8 through 14. Refer to Figure 8 for the Phase 1c residential component and Figures 9.1 through 9.5 for Beyer Boulevard.

2.2.1.4 Phase 2

Rough grading would be conducted within Phase 2 areas. Additionally, Phase 2 includes implementation of primitive trails (see Figure 5 and Section 2.2.4 below). Future site-specific grading and development plans would be required within Phase 2 areas as development is proposed.

2.2.1.5 Phase 4

Rough grading would be conducted within portions of Phase 4 areas, primarily supporting grading for Caliente Avenue, south of Central Avenue and future residential development within Planning Area 7. Future site-specific grading and development plans would be required within Phase 4 areas as development is proposed. Phase 4: Grading estimates for Phase 4 include approximately 22,500 cubic yards of cut and 342,500 cubic yards of fill with anticipated import volumes of 320,000 cubic yards originating from other portions of the site.

2.2.2 Infrastructure Improvements

2.2.2.1 Roadway Improvements

a. Caliente Avenue and Central Avenue

Access to proposed Phase 1a residential development would require construction of Caliente Avenue north of the Specific Plan boundary from its current terminus in Otay Mesa, south to the planned connection with Central Avenue. Phase 1a would include construction of this segment of Caliente Avenue as well as Central Avenue west of Caliente Avenue. Caliente Avenue south of Central Avenue is part of the Phase 4 component.

Map Source: CivilSense, Inc.

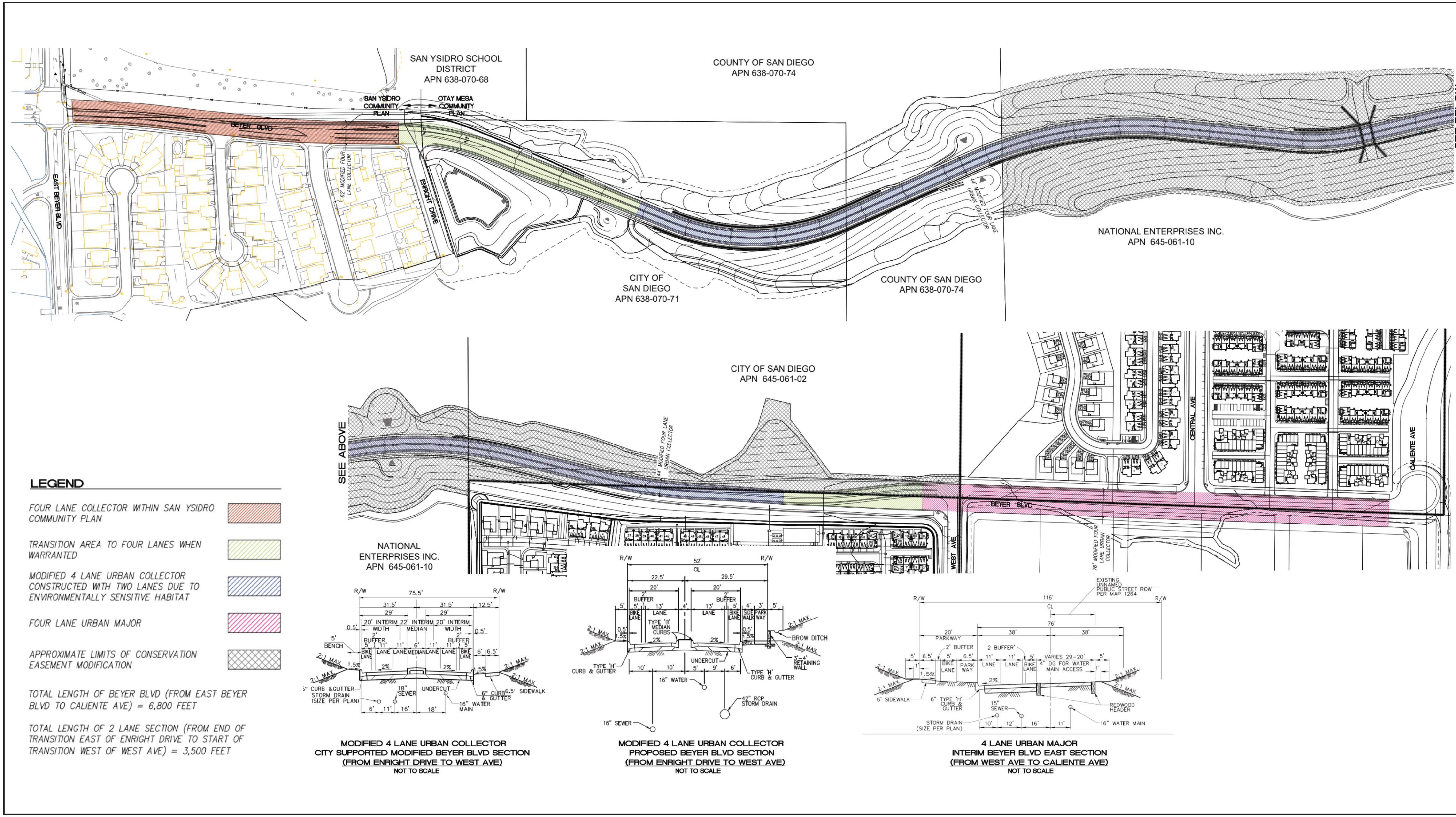

FIGURE 9.1
Beyer Boulevard

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Image Source: NearMap (Flown January 2024)

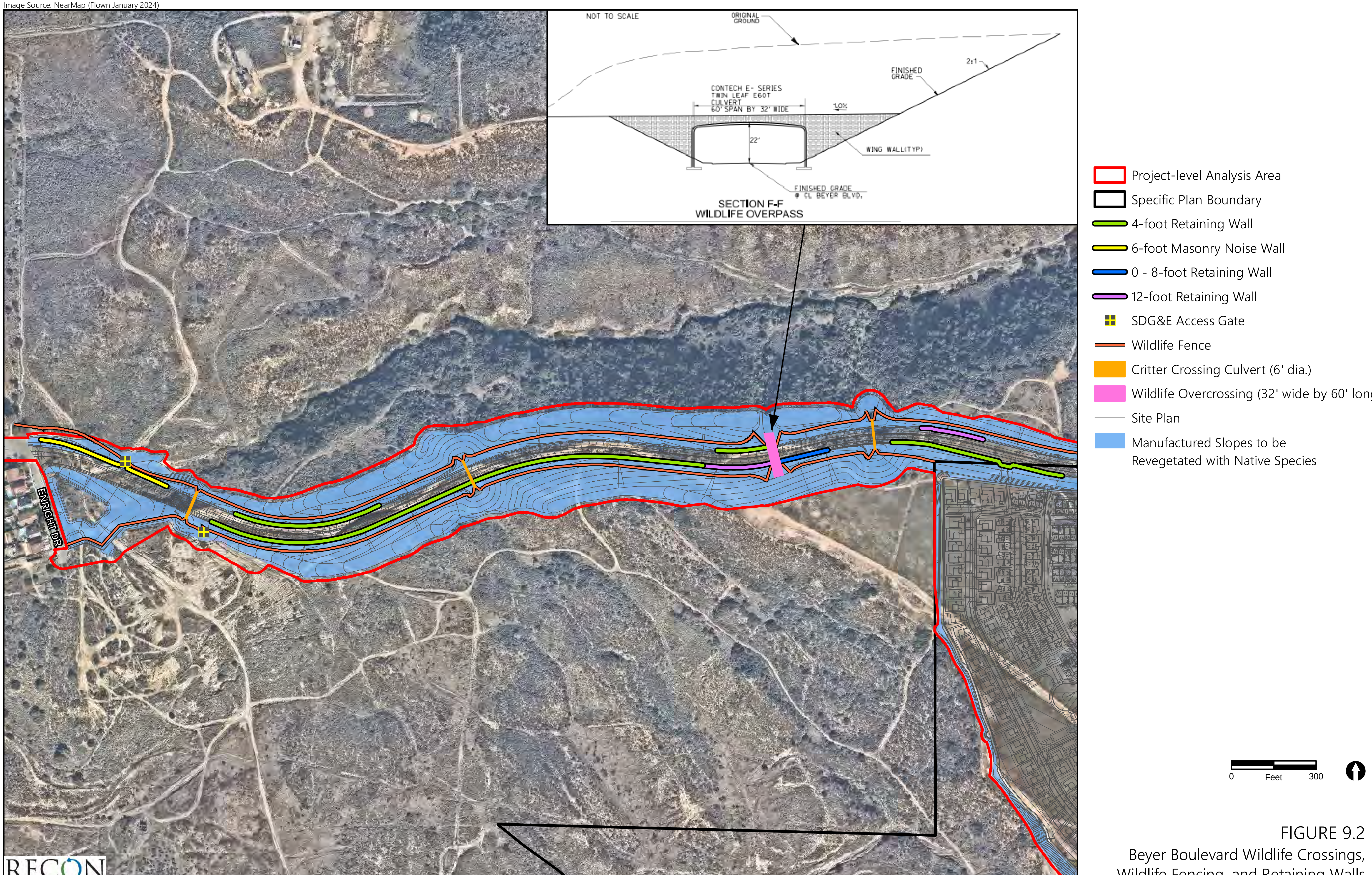

FIGURE 9.2
Beyer Boulevard Wildlife Crossings, Wildlife Fencing, and Retaining Walls

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Map Source: Leppert Engineering Corp.

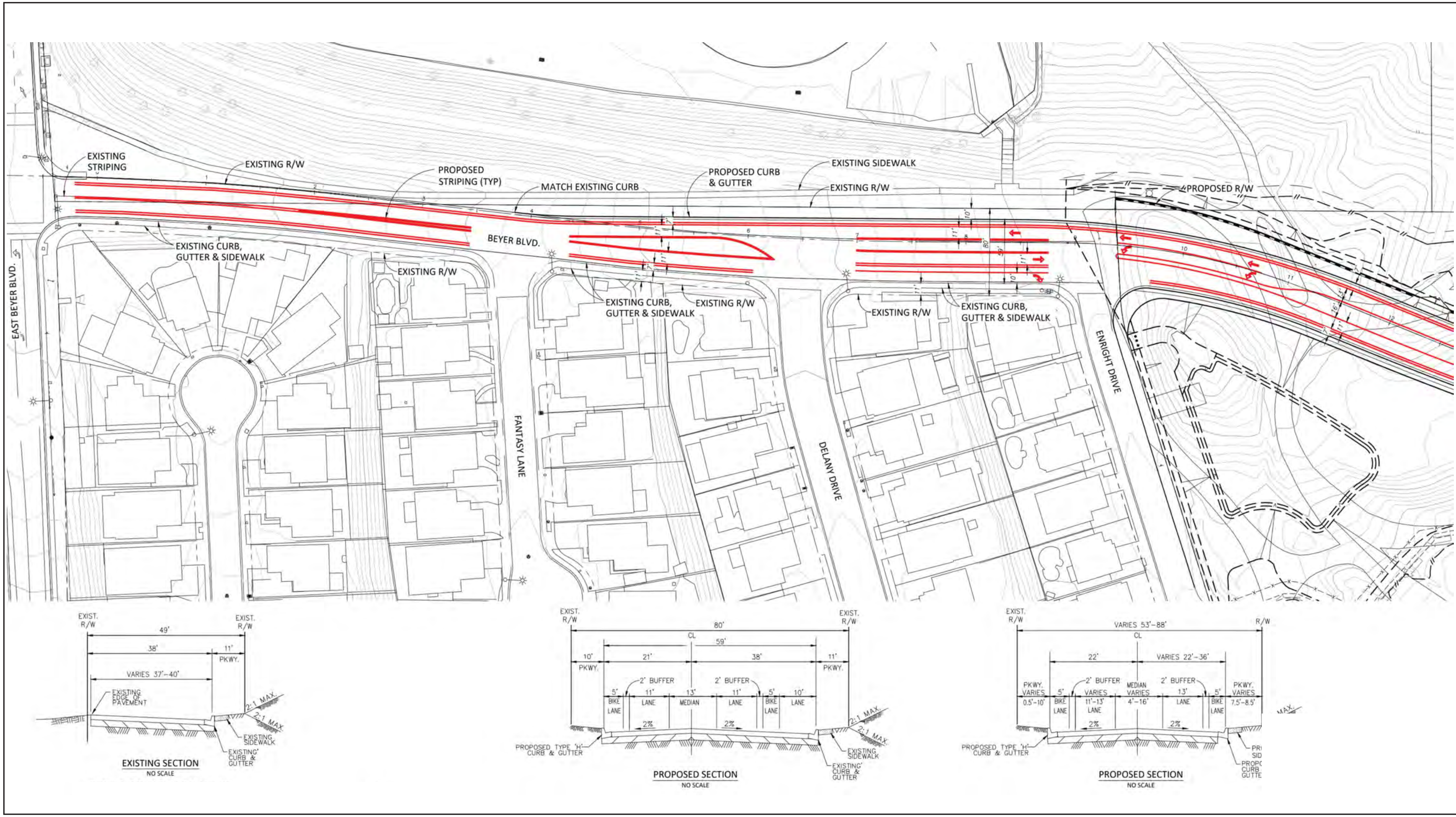

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FIGURE 9.3
Beyer Boulevard between Enright Drive and East Beyer Boulevard - Interim Condition

Image Source: NearMap (Flown January 2024)

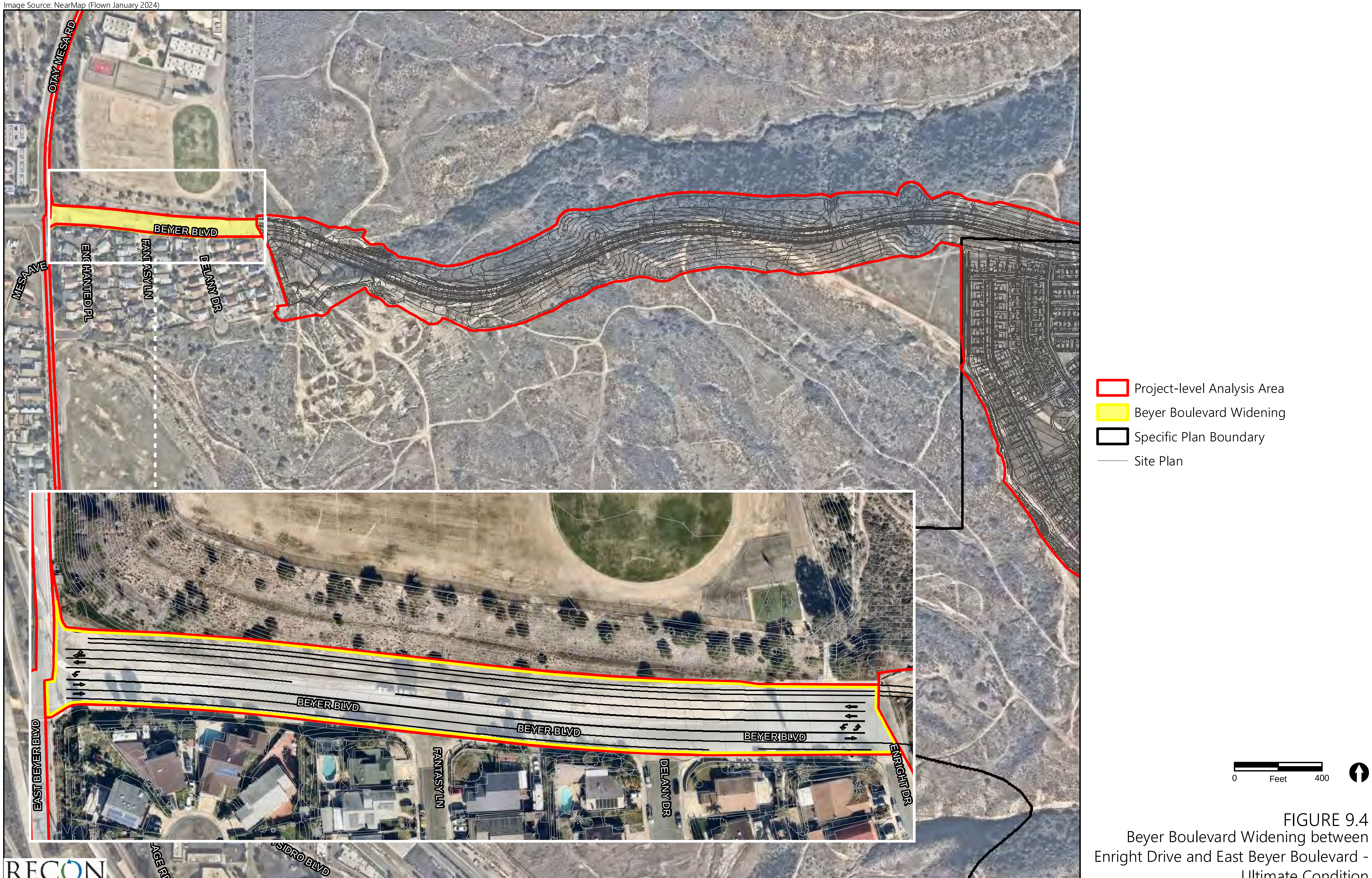

FIGURE 9.4
Beyer Boulevard Widening between Enright Drive and East Beyer Boulevard - Ultimate Condition

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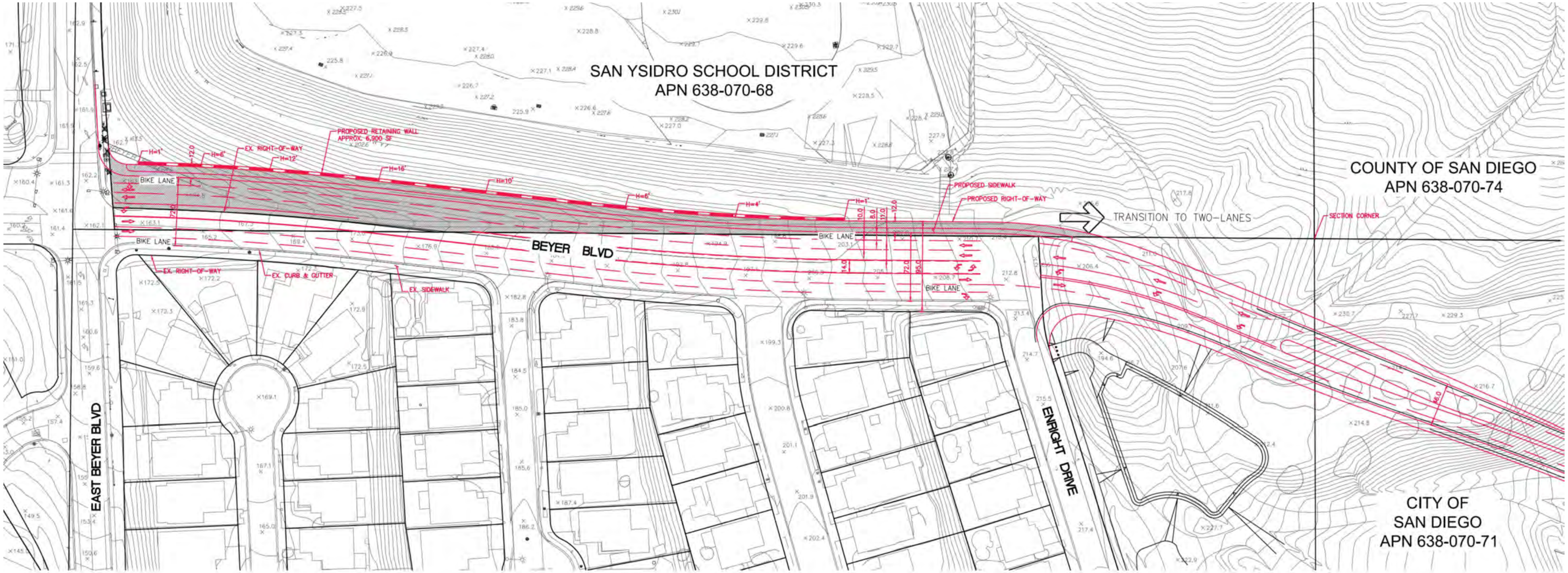
Map Source: Civil Sense



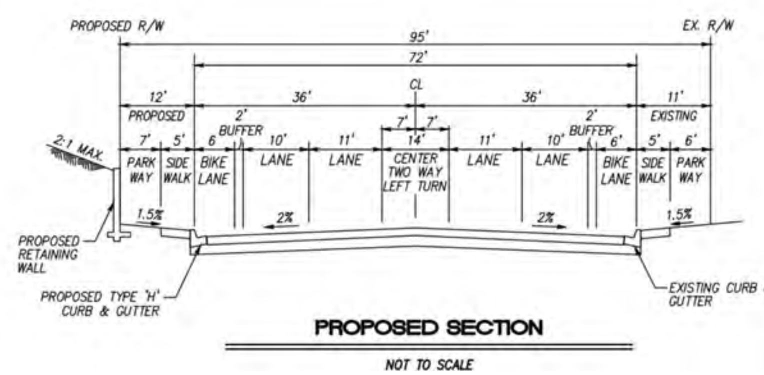


FIGURE 9.5

Beyer Boulevard between Enright Drive and East Beyer Boulevard - Ultimate Four Lane Option

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b. Beyer Boulevard

Implementation of the project-level areas would require construction of an extension of Beyer Boulevard providing access from San Ysidro to the Specific Plan area (see Figures 9.1 through 9.5).

Beyer Boulevard East

As detailed in the Specific Plan, Beyer Boulevard within the Specific Plan boundary is referred to as Beyer Boulevard East and would be constructed as a modified 4-lane Urban Major.

Beyer Boulevard West

The extension of Beyer Boulevard West of the Specific Plan from Enright Drive to West Avenue is referred to as Beyer Boulevard West, which is planned as a modified 4-lane Urban Collector. Although planned as a modified 4-lane Urban Collector, the roadway is constrained by environmental resources and the Specific Plan specifies that this segment would be built with two instead of four lanes (see Figure 9.1). All manufactured slopes surrounding Beyer Boulevard would be revegetated with native plant species.

The proposed Beyer Boulevard West extension would incorporate wildlife movement features including undercrossings, an overcrossing, and wildlife fencing along both sides of the road. Along the western extent of the proposed Beyer Boulevard extension a 6-foot-tall masonry wall would be constructed on the north side of the road to provide separation and noise attenuation from the adjacent habitat. Two San Diego Gas and Electric (SDG&E) access points with gates are proposed along Beyer Boulevard to provide ongoing access to SDG&E easements and power lines within the surrounding open space. A number of retaining walls have been incorporated into the roadway design largely to limit habitat impacts. Retaining walls include 4-foot to 12-foot retaining walls along the north and south sides of Beyer Boulevard to minimize impacts to conserved properties (see Figure 9.2).

Beyer Boulevard between Otay Mesa Road and Enright Drive (San Ysidro)

As detailed in Figure 9.3, the current Beyer Boulevard in San Ysidro between Otay Mesa Road and Enright Drive is proposed to be improved with revised striping within the existing right-of-way limits during Grading Phase 1b. This is an interim improvement that would ensure adequate roadway functioning until the final roadway improvement is implemented as part of Phase 4 of the Specific Plan.

The limits of disturbance for this segment assume a wider area in anticipation of the requirement to widen this segment to four lanes to its ultimate improvement width which would require acquisition of right-of-way from the San Ysidro School District. The ultimate Beyer Boulevard improvement between Enright Drive and Otay Mesa Road is depicted on Figure 9.4. The required timing for this improvement corresponds to the implementation of Phase 4 of the Specific Plan prior to issuance of occupancy permits for the 3,301st dwelling unit (after construction of an elementary school and a 17.6 public park), although it may be implemented sooner.

As detailed in Figure 9.5, the ultimate widening of Beyer Boulevard between Enright Drive and Otay Mesa Road would include construction of an approximately 6,900-linear-foot retaining wall ranging in height from 1 to 16 feet at its highest point located along the northern side of the road adjacent to the San Ysidro School District property.

c. West Avenue and Street A

Internal to the Specific Plan, Phase 1b would also include construction of West Avenue and Street A to provide access to residential development areas.

d. State Route 905 and Caliente Avenue Improvements

The project proposes improvements to the State Route (SR-905) and Caliente Avenue interchange. The improvements detailed below shall be completed and operational prior to occupancy of the 201st dwelling unit.

State Route 905 Westbound On-Ramp Widening

Widening of approximately 775 linear feet of the westbound SR-905 On-Ramp at Caliente Avenue is required to ensure adequate roadway operations with implementation of Phase 1 of the project. This improvement involves adding a lane within the existing California Department of Transportation right-of-way (Figure 10.1).

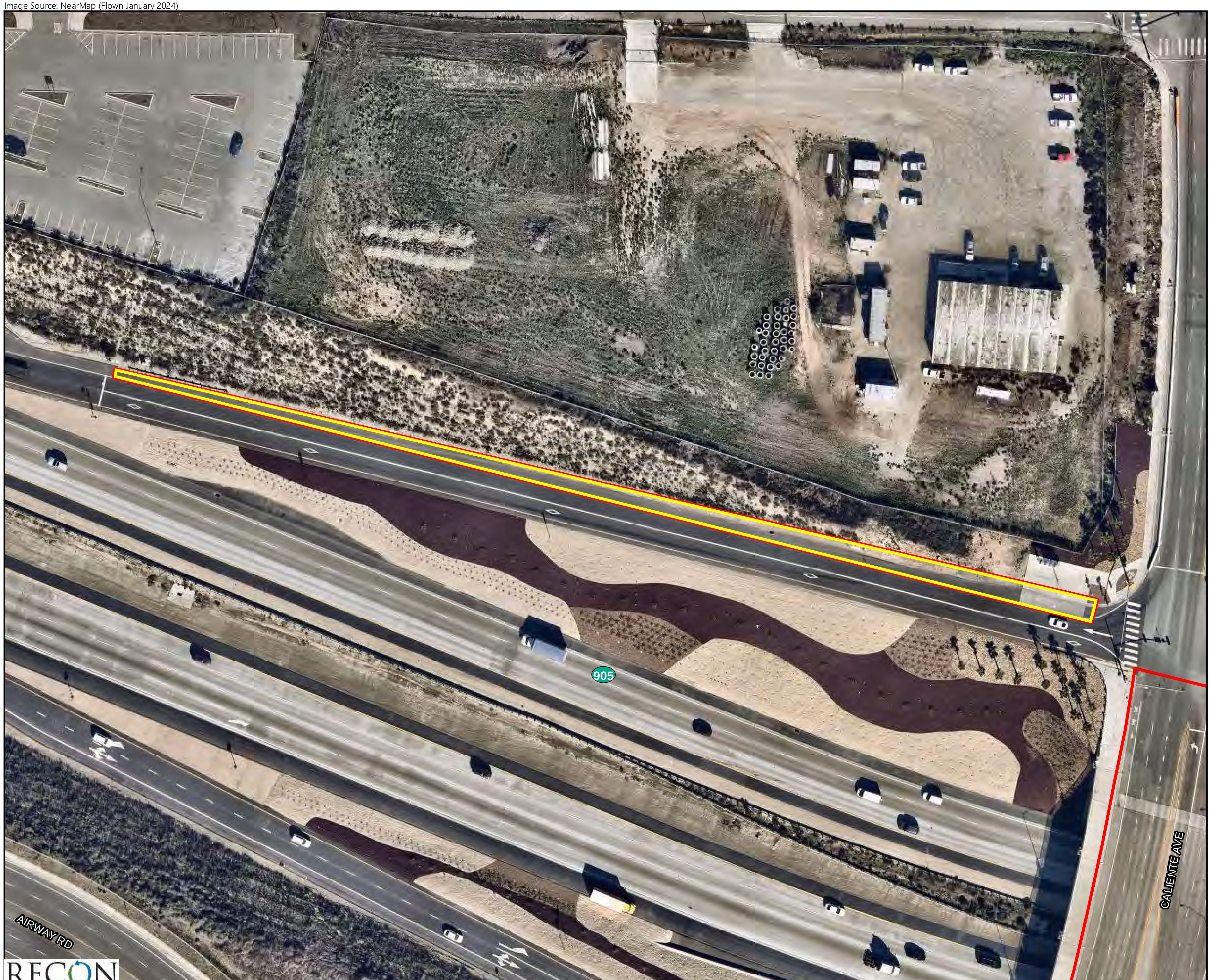
Restriping and Signal Modifications within the Caliente Avenue Bridge over State Route 905

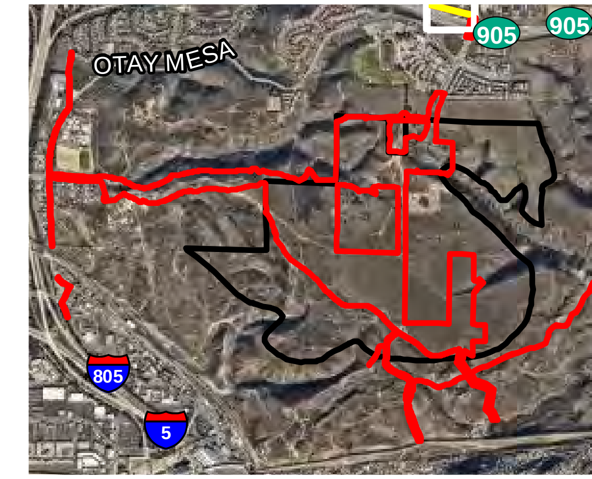
Intersection reconfiguration of Caliente Ave/SR-905 westbound ramps are proposed to install a second northbound left turn lane (through re-striping on the bridge over SR-905), construct a second receiving lane to the on-ramp, and restripe the number one left turn lane from 100 feet of storage to 300 feet of storage (see Figure 10.2). Traffic signal modifications, designed to the satisfaction of the City Engineer and Caltrans Engineer, may also be required.

e. Southern Emergency Access Road

The project is subject to the City's Fire Protection and Prevention regulations (San Diego Municipal Code Section 511.0104), which adoped the 2022 California Fire Code, Appendix D, Section D106.2., "Multiple-Family Residential Developments with Significant Fire Risk," which states that multi-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system. Accordingly, the project requires a secondary access route prior to occupancy of the 200th unit. The secondary emergency access is proposed to be provided through either the construction of Beyer Boulevard or through improving an existing utility road south of the Specific Plan area to an EVA road that meets secondary emergency access requirements (see Figure 10.3). The Beyer Boulevard connection is required to be operational prior to occupancy of the 700th unit for transportation and circulation purposes.

Image Source: NearMap (Flown January 2024)





Project-level Analysis Area
Road Widening
Specific Plan Boundary

0 Feet 75

FIGURE 10.1
State Route 905 & Caliente Avenue
Westbound On-Ramp

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Map Source: Civil Sense, Inc.

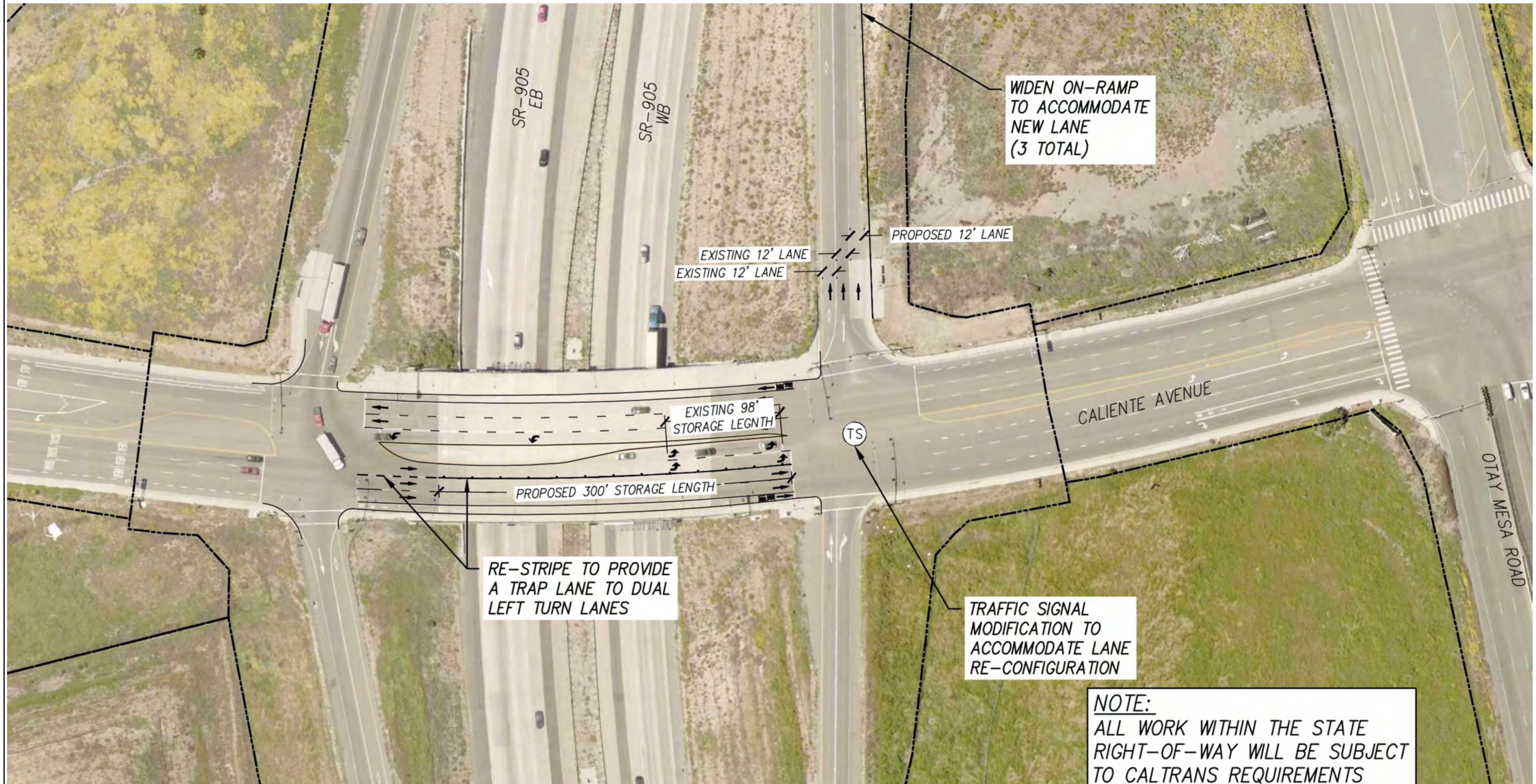

FIGURE 10.2
Caliente Avenue SR-905 Bridge Restriping and Signal Improvements

RECON
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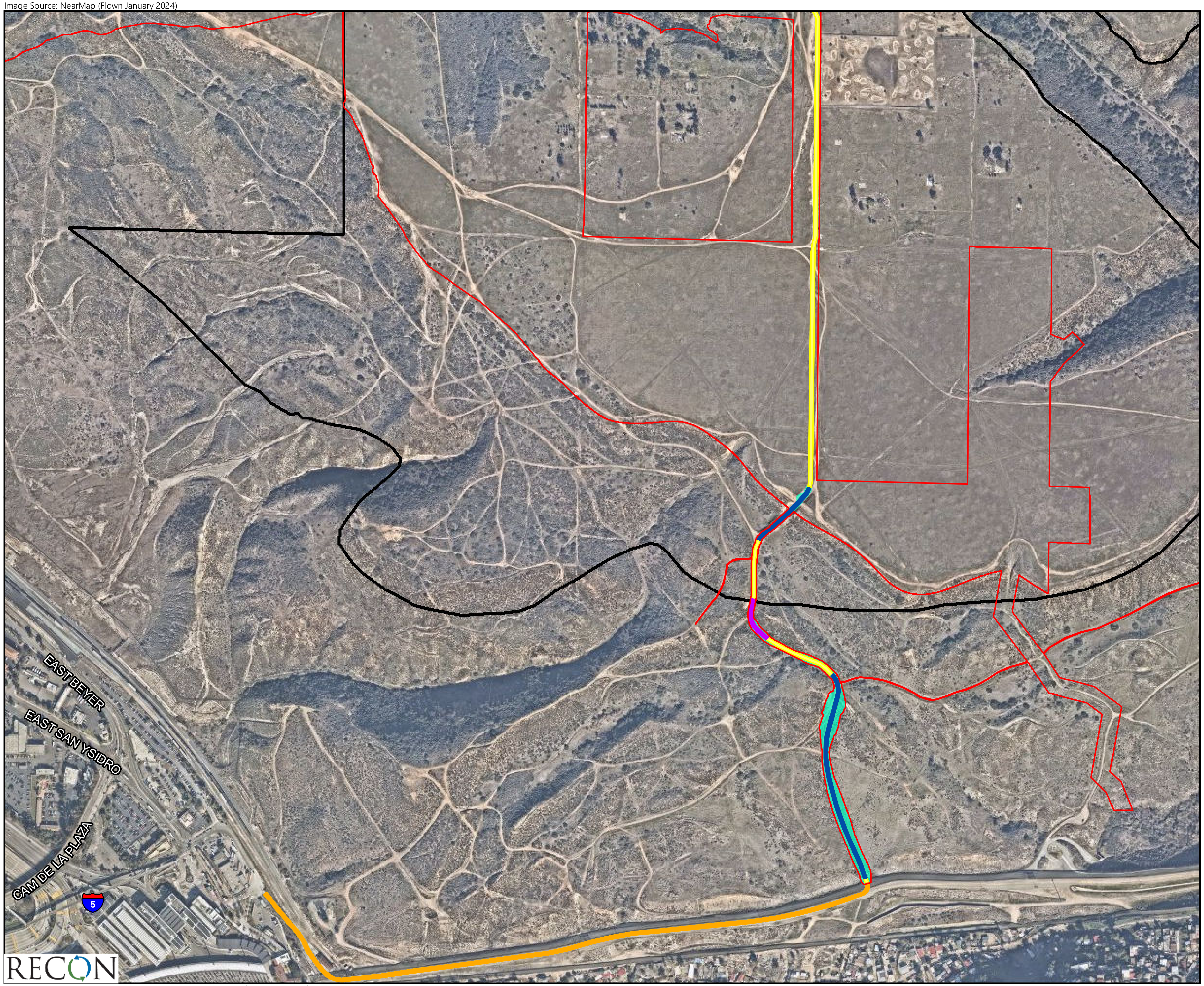
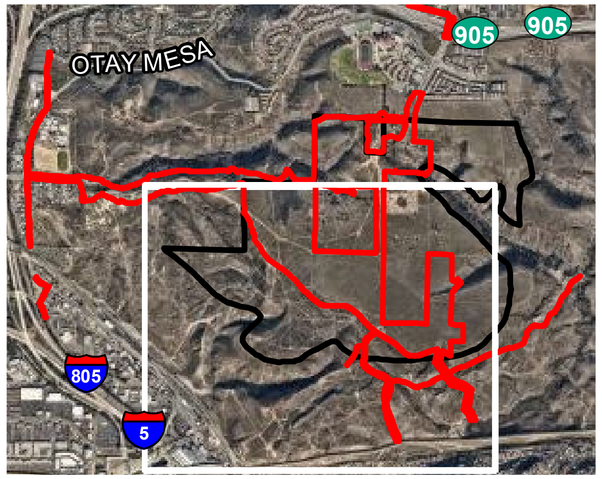
Image Source: NearMap (Flown January 2024)





Project-level Analysis Area

Specific Plan Boundary

20-foot Wide Emergency Vehicle Access (EVA)*

Asphalt Paving Required

Concrete Paving Required (15% Grade)

Decomposed Granite/Gravel Surfacing

Existing Access Road

Grading

*Narrows to 14 feet to avoid grading into sensitive resources

Note: The ultimate location of the emergency access route on the top of the mesa is conceptual and may shift within the project-level grading footprint based on need.

0 Feet 550

FIGURE 10.3
Emergency Vehicle Access Road

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In the event the EVA road is implemented as a component of this project, improvements would involve grading, scraping, and placement of surfacing including concrete, asphalt, and/or decomposed granite or gravel. The road width would be 20 feet wide except in one location it would narrow to 14 feet to avoid sensitive environmental resources. Grading is required along portions of the road to reduce the steepness and achieve a maximum 15 percent grade. Approximately 1.99 acres of grading would be required with the remaining disturbance limited to scraping the road to achieve a consistently flat surface. Approximately 0.74 acre of the roadway would require concrete surfacing in areas that would be at a 15 percent grade. A 0.12-acre portion of the road would require asphalt due to steep grades, while the remaining portions of the road (approximately 2.09 acres) would be surfaced with decomposed granite or gravel for stabilization. Grading quantities include approximately 6,780 cubic yards of cut and 8,220 cubic yards of fill, which is captured as part of the overall project-level grading quantities reported in Section 2.2.3 due to grading balancing.

The EVA road would provide secondary emergency-only vehicle access for up to the first 699 units within Phase 1. Ultimately, after build-out of Phase 2 residential components and public roadways including South Caliente Avenue, the EVA road access would be provided from the intersection of South Caliente Avenue and D Street. Access to the EVA road would be gated to prohibit public vehicular access; however, pedestrian and non-motorized bicycles would be permitted along the EVA road to allow connection to the proposed primitive trail network.

2.2.2.2 Water and Sewer Improvements

As shown in Figure 8, a temporary sewer pump station would be installed to serve the first 200 residential units. Additionally, as shown in Figure 8, a second temporary sewer pump station would be installed to serve Phase 1b. Water and sewer lines would ultimately be constructed within Beyer Boulevard concurrent with the construction of the Beyer Boulevard extension. After construction of Beyer Boulevard and installation of water and sewer line connections (shown in Figure 11), the temporary pump station would be removed, and residential units would be connected to the permanent water and sewer facilities.

Water and sewer infrastructure would include the construction of approximately 5,176 linear feet of sewer pipelines and 4,987 linear feet of water pipelines. A 16-inch water line connection would extend west within existing Beyer Boulevard in San Ysidro and north within Otay Mesa Road and Otay Mesa Place connecting to the Princess Park Pump Station located at 1740 Masterson Lane (see Figure 11). Sewer line improvements would require construction of a pipeline within East Beyer Boulevard and Center Street connecting to existing sewer lines. Construction of water and sewer lines would require installation using a backhoe straddling the new pipeline installation trench, requiring a disturbance width of 20 feet along pipeline installation locations.

Image Source: NearMap (Flown January 2024)

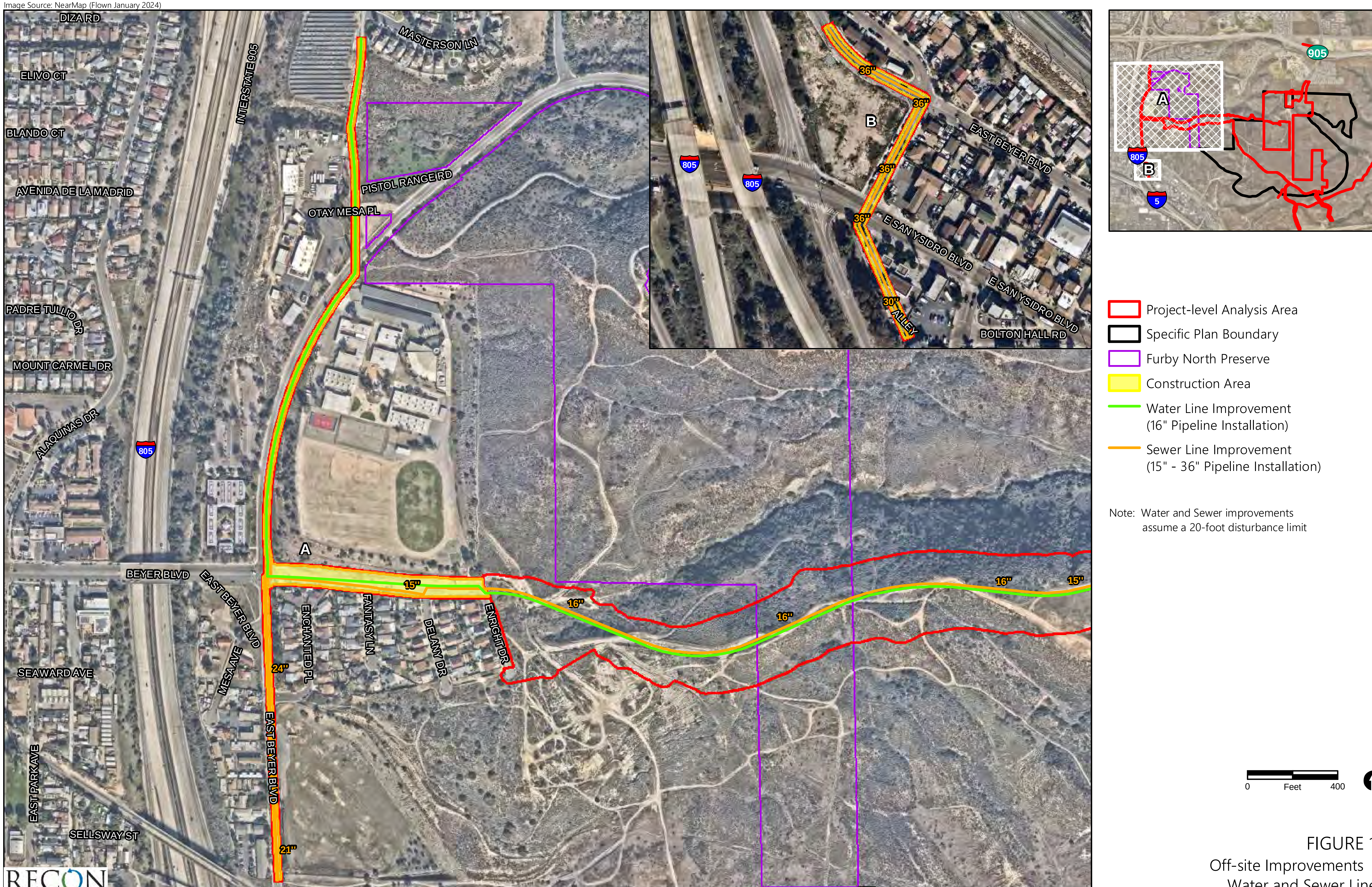

FIGURE 11
Off-site Improvements - Water and Sewer Lines

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2.2.3 Grading

The project-level grading component includes grading within Phase 1 areas including (Planning Areas 8 through 14), the Beyer Boulevard extension, the EVA road, and off-site improvement areas. Rough grading areas include Phase 2 (Planning Areas 15 to 20) and Phase 4 (a portion of Planning Area 1 and Planning Area 7). Grading volumes include 1,936,352 cubic yards of cut and 1,850,224 cubic yards of fill, with anticipated export volumes of approximately 86,128 cubic yards, which would be placed within rough grading areas located within Planning Areas 15 through 18 or used grading balancing for the EVA road and Phase 4 areas.

Grading volumes for Phase 4 are included in the overall grading volumes discussed above, but individually include 22,500 cubic yards of cut and 342,500 cubic yards of fill originating from other portions of the project site. Grading volumes for the EVA road are similarly included in the overall grading volumes discussed above, but individually include 6,780 cubic yards of cut and 8,220 cubic yards of fill, with anticipated import volumes of 1,440 cubic yards coming from other portions of the project site.

Anticipated grading phasing is depicted on Figure 5. As shown, grading would be implemented in phases, with Phase 1 including grading to allow the development of up to 920 residential units, Phase 2 including the rough grading areas, the EVA road phase including grading within the EVA road area, the Beyer Boulevard phase includes grading for the Beyer Boulevard extension and off-site improvements are identified as their own phase.

2.2.4 Trail Improvements

Consistent with the OMCP Recreation Element Policy 7.2-5, the final trail alignments within the Specific Plan area were to be finalized and analyzed with future Specific Plans and project-specific proposals. Due to the Specific Plan connection to the surrounding OMCP conceptual trail network, the overall trail network surrounding the Specific Plan area was evaluated as part of the project. The proposed trail networks evaluated and implemented as part of the project-level components include those portions of the perimeter trail located adjacent to Planning Areas 9, 10, 12 and 14, in addition to the major east west primitive trail located south/southeast of the Specific Plan area (see Figure 6 for the proposed trail network and Figure 7 for those portions of the primitive trail within the surrounding open space that would be implemented as a project-level component. The remainder of the project-level perimeter trail would be implemented as future subdivision maps are proposed, corresponding with Phases 2a and 2b.

An existing utility trail would be maintained to provide a connection to the southern border wall road. From the utility trail, access would be provided to two primitive trails including one out and back trail segment west of the utility road and another east west primitive trail to the east (see Figure 6). The eastern primitive trail may ultimately provide connections to future primitive trails associated with the OMCP trail network; however, at this time, specific alignments are not known.

Approximately 0.96 mile of primitive trails (4 feet wide) are proposed to be improved both within the Specific Plan and south of the Specific Plan boundary. Trail improvements would include trail stabilization, erosion control, and closure of unauthorized trail routes in proximity to proposed formal trail alignments. Primitive trails would be a natural soil/dirt surface and would be for passive recreation only.

In order to close unauthorized trails, restoration of disturbed land and non-native grassland areas within a 100-foot-wide trail corridor (50 feet on each side of the trail) is proposed. Habitat enhancement would be implemented in disturbed lands and non-native grasslands. At trailheads leading into the primitive trail network surrounding the open space, trash cans would be provided and signage would be installed to notify trail users to remain on designated trails. Within the primitive trail network, the trail would be a natural dirt surface. Where needed to protect sensitive resources such as aquatic resources or sensitive plant species, peeler pole fencing would be installed to ensure trail users do not disturb these features.

2.2.5 Landscaping and Restoration

A landscape plan has been prepared covering Planning Areas 8 through 14 in addition to the Beyer Boulevard extension. After manufactured slopes are created, landscaping would be installed. Manufactured slopes near or within open space areas would be revegetated with native species. A drainage outfall proposed to be installed in the open space southeast of the Specific Plan would also be subject to revegetation after pipe installation.

In addition to typical slope revegetation efforts, the project includes a number of habitat restoration efforts including restoration of disturbed lands within a 100-foot corridor of the primitive trail alignments as detailed in Figure 7, in addition to implementation of restoration activities to create Otay tarplant habitat within existing non-native grassland, creation of coastal cactus wren habitat within disturbed lands, creation of a vernal pool and Quino checkerspot butterfly habitat restoration area, in addition to wetland restoration located within Spring Canyon (southeast of the Specific Plan area). These restoration, habitat creation, and revegetation efforts would some limited grading and contouring activities, non-native species removal, salvage and translocation of sensitive species, and planting of native species to create native habitats. Habitat management and maintenance efforts would be implemented over a specified period to control non-natives and ensure success criteria for each of the restoration efforts.

2.2.6 Project Design Features

The project would not include natural gas appliances or heating associated with the project-level residential components. The requirement to have all electric appliances and heating would be included as a project condition of approval. The project would also not include residential fireplaces.

3.0 Regulatory Framework

3.1 Federal Regulations

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

Six criteria pollutants of primary concern have been designated: ozone, carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead (Pb), and respirable particulate matter (PM_{10} and $PM_{2.5}$). The primary NAAQS ". . . in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health . . . " and the secondary standards ". . . protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 USC 7409(b)(2)]. The primary NAAQS were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The NAAQS are presented in Table 1 (California Air Resources Board [CARB] 2024a).

An air basin is designated as either attainment or non-attainment for a particular pollutant. Once a non-attainment area has achieved the AAQS for a particular pollutant, it is re-designated as an attainment area for that pollutant. To be redesignated, the area must meet air quality standards for three consecutive years. After re-designation to attainment, the area is known as a maintenance area and must develop a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the federal CAA. The SDAB is a non-attainment area for the federal ozone standard.

3.2 State Regulations

3.2.1 Criteria Pollutants

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

Similar to the federal CAA, the state classifies as either "attainment" or "non-attainment" areas for each pollutant based on the comparison of measured data with the CAAQS. The SDAB is a non-attainment area for the state ozone standards, the state PM_{10} standard, and the state $PM_{2.5}$ standard.

Table 1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM_{10})[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)[9]	24 Hour	No Separate State Standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	9 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-dispersive Infrared Photometry	35 ppm (40 mg/m^3)	–	Non-dispersive Infrared Photometry
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m^3)	–	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3 Hour	–		–	0.5 ppm (1,300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[11]	–	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chroma-tography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chroma-tography			

See footnotes on next page.

Table 1 Ambient Air Quality Standards
ppm = parts per million; ppb = parts per billion; μg/m^3 = micrograms per cubic meter; – = not applicable. [1] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. [2] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies. [3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas. [4] Any equivalent measurement method which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used. [5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health. [6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. [7] Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA. [8] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. [9] On February 7, 2024, the national annual $PM_{2.5}$ primary standard was lowered from 12.0 μg/m^3 to 9.0 μg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m^3, as was the annual secondary standards of 15 μg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years. [10] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of ppb. California standards are in units of ppm. To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm. [11] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of ppb. California standards are in units of ppm. To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm. [12] The Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants. [13] The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 μg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved. [14] In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively. SOURCE: CARB 2024a.

3.2.2 Toxic Air Contaminants

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

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

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

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

Following the identification of DPM as a TAC in 1998, CARB has worked on developing strategies and regulations aimed at reducing the risk from DPM. The overall strategy for achieving these reductions is found in the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB 2000). A stated goal of the plan is to reduce the statewide cancer risk arising from exposure to DPM by 85 percent by 2020. To monitor the effectiveness of these efforts, CARB has supported field campaigns that measure real-world emissions from heavy-duty vehicles, and results indicate that regulations aimed at reducing emissions of DPM have been successful.

In April 2005, CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2005). The handbook makes recommendations directed at protecting sensitive land uses from air pollutant emissions while balancing a myriad of other land use issues (e.g., housing, transportation needs, economics, etc.). It notes that the handbook is not regulatory or binding on local agencies and recognizes that application takes a qualitative approach. As reflected in the CARB Handbook, there is currently no adopted standard for the significance of health effects from mobile sources. Therefore, the CARB has provided guidelines for the siting of land uses near heavily traveled roadways. Of pertinence to this study, the CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles per day should be avoided when possible.

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

3.2.3 State Implementation Plan

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

The SDAPCD is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. The SIP plans for San Diego County specifically include the Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County (2012), and the 2004 Revision to the California State Implementation Plan for Carbon Monoxide – Updated Maintenance Plan for Ten Federal Planning Areas.

3.2.4 The California Environmental Quality Act

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

3.3 San Diego Air Pollution Control District

The SDAPCD is the agency that regulates air quality in the SDAB. The SDAPCD prepared the Regional Air Quality Standards (RAQS) in response to the requirements set forth in the California CAA AB 2595 (SDAPCD 1992) and the federal CAA. Motor vehicles are San Diego County's leading source of air pollution. In addition to these sources, other mobile sources include construction equipment, trains, and airplanes. Reducing mobile source emissions requires the technological improvement of existing mobile sources and the examination of future mobile sources, such as those associated with new or modification projects (e.g., retrofitting older vehicles with cleaner emission technologies). In addition to mobile sources, stationary sources also contribute to air pollution in the SDAB. Stationary sources include gasoline stations, power plants, dry cleaners, and other commercial and industrial uses. Stationary sources of air pollution are regulated by the local air pollution control or management district, in this case the SDAPCD.

The SDAPCD is responsible for preparing and implementing the RAQS. As part of the RAQS, the SDAPCD developed Transportation Control Measures (TCMs) for the air quality plan prepared by the San Diego Association of Governments (SANDAG) in accordance with AB 2595 and adopted by SANDAG on March 27, 1992, as Resolution Number 92-49 and Addendum. The RAQS and TCM set forth the steps needed to accomplish attainment of NAAQS and CAAQS. The most recent update of the RAQS (2022 RAQS) and corresponding TCM was adopted in March 2023.

The SDAPCD has also established a set of rules and regulations initially adopted on January 1, 1969 and periodically reviewed and updated. These rules and regulations are available for review on the agency's website (https://www.sdapcd.org/content/sdapcd/rules.html).

3.4 Otay Mesa Community Plan Mitigation Framework

Air quality impacts associated with the OMCP are addressed in the Final Program Environmental Impact Report for the OMCP (Project Number 30330/304032, State Clearing House No. 2004051076) approved by the City in 2013 (City of San Diego 2016). The following air quality Mitigation Framework was identified in the OMCP FEIR:

AQ-1: For projects that would exceed daily construction emissions thresholds established by the City, best available control measures/technology shall be incorporated to reduce construction emissions to below daily emission standards established by the City. Best available control measures/technology shall include:

a. Minimizing simultaneous operation of multiple pieces of construction equipment;
b. Use of more efficient, or low pollutant emitting, equipment, e.g., Tier III or IV rated equipment;
c. Use of alternative fueled construction equipment;
d. Dust control measures for construction sites to minimize fugitive dust, e.g., watering, soil stabilizers, and speed limits; and
e. Minimizing idling time by construction vehicles.

AQ-2: Development that would significantly impact air quality, either individually or cumulatively, shall receive entitlement only if it is conditioned with all reasonable mitigation to avoid, minimize, or offset the impact. As a part of this process, future projects shall be required to buffer sensitive receptors from air pollution sources through the use of landscaping, open space, and other separation techniques.

AQ-3: Prior to the issuance of building permits for any new facility that would have the potential to emit toxic air contaminants, in accordance with Assembly Bill 2588, an emissions inventory and health risk assessment shall be prepared. If adverse health impacts exceeding public notification levels (cancer risk equal to or greater than 10 in 1,000,000;

see Section 5.3.5.1 [b and c]) are identified, the facility shall provide public notice to residents located within the public notification area and submit a risk reduction audit and plan to the Air Pollution Control District (APCD) that demonstrates how the facility would reduce health risks to less than significant levels within five years of the date the plan.

AQ-4: Prior to the issuance of building permits for any project containing a facility identified in Table 5.3-7 [of the OMCP FEIR – see Table below], or locating air quality sensitive receptors closer than the recommended buffer distances, future projects implemented in accordance with the CPU shall be required to prepare a health risk assessment (HRA) with a Tier I analysis in accordance with APCD HRA Guidelines and the Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics "Hot Spots" Program Risk Assessment Guidelines (San Diego Air Pollution Control District [SDAPCD] 2006; OEHHA 2003).

All HRAs shall include:

4. The estimated maximum 70-year lifetime cancer risk;
5. The estimated maximum non-cancer chronic health hazard index; and
6. The estimated maximum non-cancer acute health hazard index.

Risk estimates shall each be made for the off-site point of maximum health impact (PMI), the maximally exposed individual resident (MEIR), and the maximally exposed individual worker (MEIW). The location of each of these receptors shall be specified. The lifetime cancer risk, non-cancer chronic and acute health hazard indexes for nearby sensitive receptors shall also be reported. Cancer and non-cancer chronic risk estimates shall be based on inhalation risks. HRAs shall include estimates of population exposure, including cancer burden, as well as cancer and non-cancer chronic and acute risk isopleths (contours). The HRA shall identify best available control technology required to reduce risk to less than 10 in 1,000,000.

The following Table 5.3-7 is an excerpt from the OMCP FEIR identifying buffer distances referenced in OMCP FEIR AQ-4, above.

Table 5.3-7
CARB Land Use Siting Constraints

Source Category	Recommended Buffer Distance (feet)
Distribution Centers (that accommodate more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week)	1,000
Chrome Platers	1,000
Dry Cleaners using Perchloroethylene (1 machine)	300
Dry Cleaners using Perchloroethylene (2 machines)	500
Dry Cleaners using Perchloroethylene (3 or more machines)	Requires consultation with APCD
Large Gas Station (3.6 million gallons or more per year)	300
Other Gas Stations	50

4.0 Environmental Setting

4.1 Geographic Setting

The project is located within the Otay Mesa community, located immediately north of the United States/Mexico international border, about six miles east of the Pacific Ocean. The eastern portion of the SDAB is surrounded by mountains to the north, east, and south. These mountains tend to restrict airflow and concentrate pollutants in the valleys and low-lying areas below.

4.2 Climate

The project area, like the rest of San Diego County, has a Mediterranean climate characterized by warm, dry summers and mild winters. The mean annual temperature for the project area is 62 degrees Fahrenheit (°F). The average annual precipitation is 12 inches, falling primarily from November to April. Winter low temperatures in the project area average about 41°F, and summer high temperatures average about 78°F. The average relative humidity is 69 percent and is based on the yearly average humidity at Lindbergh Field (Western Regional Climate Center 2019).

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to blow pollutants away from the coast toward the inland areas. Consequently, air quality near the coast is generally better than that which occurs at the base of the coastal mountain range.

Fluctuations in the strength and pattern of winds from the Pacific High Pressure Zone interacting with the daily local cycle produce periodic temperature inversions that influence the dispersal or containment of air pollutants in the SDAB. Beneath the inversion layer pollutants become “trapped” as their ability to disperse diminishes. The mixing depth is the area under the inversion layer. Generally, the morning inversion layer is lower than the afternoon inversion layer. The greater the change between the morning and afternoon mixing depths, the greater the ability of the atmosphere to disperse pollutants.

Throughout the year, the height of the temperature inversion in the afternoon varies between approximately 1,500 and 2,500 feet above mean sea level. In winter, the morning inversion layer is about 800 feet above mean sea level. In summer, the morning inversion layer is about 1,100 feet above mean sea level. Therefore, air quality generally tends to be better in the winter than in the summer.

The prevailing westerly wind pattern is sometimes interrupted by regional “Santa Ana” conditions. A Santa Ana occurs when a strong high pressure develops over the Nevada-Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds over the mountains and out to sea.

Strong Santa Anas tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin to the north are blown out over the ocean, and low pressure over Baja California draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event does occur, the combination of transported and locally produced contaminants produce the worst air quality measurements recorded in the SDAB.

4.3 Existing Air Quality

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

Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by the CARB or federal standards set by the U.S. EPA. The SDAPCD maintains 10 air quality monitoring stations located throughout the greater San Diego metropolitan region. Air pollutant concentrations and meteorological information are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

The Otay Mesa–Donovan monitoring station located at 480 Alta Road, approximately six miles northeast of the project site, is the nearest station to the project site that measures a range of pollutants. The Otay Mesa–Donovan monitoring station measures ozone, NO_2, and $PM_{2.5}$. Table 2 provides a summary of measurements collected at the Otay Mesa–Donovan monitoring station for the years 2020 through 2022. It should be noted that air quality measurements at the Otay Mesa–Donovan monitoring station are generally higher than other monitoring stations in the SDAB due to its proximity to the United States/Mexico international border where higher emissions from Mexico carry north across the border.

Table 2
Summary of Air Quality Measurements Recorded at the
Otay Mesa – Donovan Air Quality Monitoring Station

Pollutant/Standard	2020	2021	2022
Ozone			
Federal Max 8-hr (ppm)	0.100	0.068	0.076
Days 2008 Federal 8-hour Standard Exceeded (0.075 ppm)	4	0	1
Days 2015 Federal 8-hour Standard Exceeded (0.070 ppm)	10	0	2
State Max 8-hr (ppm)	0.100	0.068	0.076
Days State 8-hour Standard Exceeded (0.07 ppm)	11	0	2
Max. 1-hr (ppm)	0.113	0.085	0.114
Days State 1-hour Standard Exceeded (0.09 ppm)	3	0	1
Nitrogen Dioxide			
Max 1-hr (ppm)	0.056	0.061	0.0646
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0
Days Federal 1-hour Standard Exceeded (0.100 ppm)	0	0	0
Annual Average (ppm)	0.008	0.008	0.007

Table 2 Summary of Air Quality Measurements Recorded at the Otay Mesa – Donovan Air Quality Monitoring Station			
Pollutant/Standard	2020	2021	2022
$PM_{2.5}$*			
Federal Max. Daily (μg/m^3)	--	--	30.7
Measured Days Federal 24-hour Standard Exceeded (35 μg/m^3)	--	--	0
Calculated Days Federal 24-hour Standard Exceeded (35 μg/m^3)	--	--	--
Federal Annual Average (μg/m^3)	--	--	--
State Max. Daily (μg/m^3)	66.8	31.7	26.4
State Annual Average (μg/m^3)	13.9	12.4	--

SOURCE: CARB 2024b.
ppm = parts per million; μg/m^3 = micrograms per cubic meter; -- = Not available.
* Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

4.3.1 Ozone

Nitrogen oxides (NO_X) and hydrocarbons (reactive organic gases [ROG]) are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone, which is the primary air pollution problem in the SDAB. Because sunlight plays such an important role in its formation, ozone pollution—or smog—is mainly a concern during the daytime in summer months. The SDAB is currently designated a federal and state non-attainment area for ozone. During the past 25 years, San Diego had experienced a decline in the number of days with unhealthy levels of ozone despite the region's growth in population and vehicle miles traveled (SDAPCD 2013).

About half of smog-forming emissions come from automobiles. Population growth in San Diego has resulted in a large increase in the number of automobiles expelling ozone-forming pollutants while operating on area roadways. In addition, the occasional transport of smog-filled air from the South Coast Air Basin only adds to the SDAB's ozone problem. Stricter automobile emission controls, including more efficient automobile engines, have played a large role in why ozone levels have steadily decreased.

In order to address adverse health effects due to prolonged exposure, the U.S. EPA phased out the national 1-hour ozone standard and replaced it with the more protective 8-hour ozone standard. The SDAB is currently a non-attainment area for the previous (1997) national 8-hour standard, and is recommended as a non-attainment area for the revised (2008) national 8-hour standard of 0.075 parts per million.

Not all of the ozone within the SDAB is derived from local sources. Under certain meteorological conditions, such as during Santa Ana wind events, ozone and other pollutants are transported from the Los Angeles Basin and combine with ozone formed from local emission sources to produce elevated ozone levels in the SDAB.

Local agencies can control neither the source nor the transportation of pollutants from outside the air basin. The SDAPCD's policy, therefore, has been to control local sources effectively enough to reduce locally produced contamination to clean air standards. Through the use of air pollution control measures outlined in the RAQS, the SDAPCD has effectively reduced ozone levels in the SDAB.

Actions that have been taken in the SDAB to reduce ozone concentrations include:

- **TCMs if vehicle travel and emissions exceed attainment demonstration levels.** TCMs are strategies that will reduce transportation-related emissions by reducing vehicle use or improving traffic flow.

- **Enhanced motor vehicle inspection and maintenance program.** The smog check program is overseen by the Bureau of Automotive Repair. The program requires most vehicles to pass a smog test once every two years before registering in the state of California. The smog check program monitors the amount of pollutants automobiles produce. One focus of the program is identifying "gross polluters," or vehicles that exceed two times the allowable emissions for a particular model. Regular maintenance and tune-ups, changing the oil, and checking tire inflation can improve gas mileage and lower air pollutant emissions. It can also reduce traffic congestion due to preventable breakdowns, further lowering emissions.

- **Air Quality Improvement Program.** This program, established by AB 118, is a voluntary incentive program administered by the CARB to fund clean vehicle and equipment projects, research on biofuels production and the air quality impacts of alternative fuels, and workforce training.

4.3.2 Carbon Monoxide

The SDAB is classified as a state attainment area and as a federal maintenance area for CO. Until 2003, no violations of the state standard for CO had been recorded in the SDAB since 1991, and no violations of the national standard had been recorded in the SDAB since 1989. The violations that took place in 2003 were likely the result of massive wildfires that occurred throughout the county. No violations of the state or federal CO standards have occurred since 2003.

Small-scale, localized concentrations of CO above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as "CO hot spots" and are a concern at congested intersections, where automobile engines burn fuel less efficiently and their exhaust contains more CO.

4.3.3 Particulate Matter

Particulate matter is a complex mixture of microscopic solid or liquid particles including chemicals, soot, and dust. Anthropogenic sources of direct particulate emissions include crushing or grinding operations, dust stirred up by vehicle traffic, and combustion sources such as motor vehicles, power plants, wood burning, forest fires, agricultural burning and industrial processes. Additionally, indirect emissions may be formed when aerosols react with compounds found in the atmosphere.

Health studies have shown a significant association between exposure to particulate matter and premature death in people with heart or lung diseases. Other important effects include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and irregular heartbeat (U.S. EPA 2016).

As its properties vary based on the size of suspended particles, particulate matter is generally categorized as PM_{10} or $PM_{2.5}$

4.3.3.1 PM_{10}

PM_{10}, occasionally referred to as "inhalable coarse particles" has an aerodynamic diameter of about one-seventh of the diameter of a human hair. High concentrations of PM_{10} are often found near roadways, construction, mining, or agricultural operations.

4.3.3.2 $PM_{2.5}$

$PM_{2.5}$, occasionally referred to as "inhalable fine particles" has an aerodynamic diameter of about one-thirtieth of the diameter of a human hair. $PM_{2.5}$ is the main cause of haze in many parts of the United States. Federal standards applicable to $PM_{2.5}$ were first adopted in 1997.

4.3.4 Other Criteria Pollutants

The national and state standards for NO_2, oxides of sulfur (SO_X), and the previous standard for lead are being met in the SDAB, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future. As discussed above, new standards for these pollutants have been adopted, and new designations for the SDAB will be determined in the future. The SDAB is also in attainment of the state standards for vinyl chloride, hydrogen sulfides, sulfates, and visibility-reducing particulates.

5.0 Thresholds of Significance

Thresholds used to evaluate potential impacts to air quality are based on applicable criteria in the CEQA Guidelines Appendix G and the City Significance Determination Thresholds. The air quality and odor significance determination thresholds used herein are the same thresholds used in the OMCP FEIR. The project would have a significant air quality impact if it would:

1. Obstruct or conflict with the implementation of the San Diego RAQS or applicable portions of the SIP;

2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation;

3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state AAQS (including the release of emissions which exceed quantitative thresholds for ozone precursors);

4. Expose sensitive receptors to substantial pollutant concentration, including air toxics such as diesel particulates; or

5. Create objectionable odors affecting a substantial number of people.

The SDAPCD does not provide specific numeric thresholds for determining the significance of air quality impacts under CEQA. However, the SDAPCD does specify Air Quality Impact Analysis trigger levels for new or modified stationary sources (SDAPCD Rules 20.1, 20.2, and 20.3). The SDAPCD does not consider these trigger levels to represent adverse air quality impacts, rather, if these trigger levels are exceeded by a project, the SDAPCD requires an air quality analysis to determine if a significant air quality impact would occur. While, these trigger levels do not generally apply to mobile sources or general land development projects, for comparative purposes these levels are used to evaluate the increased emissions that would be discharged to the SDAB if the project were approved.

The SDAPCD trigger levels are also utilized in the City's Significance Determination Thresholds (City of San Diego 2022) as one of the considerations when determining the potential significance of air quality impacts for projects within the city. The air quality impact screening levels used in this analysis are shown in Table 3.

Table 3
Air Quality Impact Screening Levels

Pollutant	Emission Rate		
	Pounds/Hour	Pounds/Day	Tons/Year
NO_X	25	250	40
SO_X	25	250	40
CO	100	550	100
PM_{10}	--	100	15
Lead	--	3.2	0.6
VOC, ROG	--	137	15
$PM_{2.5}$[a]	--	67	10

SOURCE: SDAPCD, Rules 20.1, 20.2, 20.3; City of San Diego 2022.
VOC = volatile organic compounds
[a]The City does not specify a threshold for $PM_{2.5}$. Threshold here is based on SDAPCD, Rules 20.1, 20.2, 20.3.

6.0 Air Quality Assessment

Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional or local. In the case of this project, operational impacts are primarily due to emissions from mobile sources associated with vehicular travel along the roadways within the project area.

Construction and operation air emissions associated with the program-level and project-level land uses were calculated using two air quality models: California Emissions Estimator Model (CalEEMod) 2022.1 (California Air Pollution Control Officers Association 2022) and Sacramento Metropolitan Air

Quality Management District's (SMAQMD) Roadway Construction Emissions Model (RCEM) Version 9.0.1 (SMAQMD 2022).

The CalEEMod program is a tool used to estimate air emissions resulting from land development projects based on California-specific emission factors. The model estimates mass emissions from two basics sources: construction sources and operational sources (i.e., area and mobile sources). Inputs to CalEEMod include such items as the air basin containing the project, land uses, trip generation rates, trip lengths, vehicle fleet mix (percentage of autos, medium truck, etc.), trip destination (i.e., percent of trips from home to work, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters.

The RCEM is a spreadsheet-based model that is able to use basic project information (e.g., total construction months, project type, total project area) to estimate a construction schedule and quantify exhaust emissions from heavy-duty construction equipment, haul trucks, and worker commute trips associated with linear construction projects. Version 9.0.1 of the model incorporates the most currently approved 2017 Emission Factor (EMFAC2017)[1] model and off-road emissions factors model. Although RCEM was developed by SMAQMD, it is appropriate for use in the SCAQMD jurisdiction because it is applicable for all statewide construction projects that involve construction equipment that is subject to CARB construction equipment emissions standards and incorporates statewide emission factor models (EMFAC2017 and Off-Road). RCEM calculates fugitive dust, exhaust, and off-gas emissions from grubbing/land clearing, grading/excavation, drainage/utilities/sub-grade, and paving activities associated with construction projects that are linear in nature (e.g., road or levee construction, pipeline installation, transmission lines).

Program-level and project-level operational emissions were calculated using CalEEMod. CalEEMod was also used to calculate project-level construction emission associated with all project-level grading activities, and construction of the Planning Areas 8 through 14 land uses. Project-level construction emissions associated with the construction of the Beyer Boulevard and Caliente Avenue extensions, water and sewer infrastructure improvements west of Beyer Boulevard, and SR-905 ramp widening were calculated using RCEM. This was done because RCEM calculates emissions specifically from linear projects (roadway extensions, pipelines, etc.) and provides a better estimate of the types and amounts of construction equipment and activities needed for these types of projects.

The CalEEMod and RCEM output files contained in Attachments 1 through 7 indicate the specific outputs for each model run. Emissions of NO_X, CO, SO_X, PM_{10}, $PM_{2.5}$, and ROG are calculated. Emission factors are not available for lead, and consequently, lead emissions are not calculated. The SDAB is currently in attainment of the federal and state lead standards. Furthermore, fuel used in construction equipment and most other vehicles is not leaded.

[1] The 2021 Emission Factor (EMFAC2021) model was released in January 2021; however, EMFAC2021 has not yet been approved for use by the U.S. Environmental Protection Agency (U.S EPA). EMFAC2017 is the most recent version of the model approved by the U.S. EPA, and was therefore used in this analysis. Use of EMFAC2021 would not result in emissions that are substantially different than those calculated in this analysis, particularly since the main source of emissions would be construction equipment which are calculated using the Off-Road emissions factor model methodologies incorporated into RCEM.

6.1 Construction Emissions

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

- fugitive dust from grading activities;
- construction equipment exhaust;
- construction-related trips by workers, delivery trucks, and material-hauling trucks; and
- construction-related power consumption.

Construction-related pollutants result from dust raised during demolition and grading, emissions from construction vehicles, and chemicals used during construction. Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Construction operations are subject to the requirements established in Regulation 4, Rules 52, 54, and 55, of the SDAPCD's rules and regulations (SDAPCD 2023).

Heavy-duty construction equipment is usually diesel powered. In general, emissions from diesel-powered equipment contain more NO_X, SO_X, and particulate matter than gasoline-powered engines. However, diesel-powered engines generally produce less CO and less ROG than do gasoline-powered engines. Standard construction equipment includes tractors/loaders/backhoes, rubber-tired dozers, excavators, graders, cranes, forklifts, rollers, paving equipment, generator sets, welders, cement and mortar mixers, and air compressors.

6.1.1 Program-level Analysis

Air pollutants generated by the construction of projects within the Specific Plan area would vary depending upon the number of projects occurring simultaneously and the size of each individual project. Construction-related pollutants result from dust raised during grading, exhaust emissions from construction vehicles, and products used during construction. Construction operations are subject to the requirements established in Regulation 4, Rules 52 and 54, of the SDAPCD's rules and regulations, which are intended to limit and control fugitive dust emissions. At the time future Planning Areas are proposed for implementation, site specific evaluation would be required to consider construction emissions of particular phases.

Program-level construction emissions were evaluated as part of the FEIR for the OMCP. To simulate the range of potential air emissions that would occur, the FEIR evaluated two hypothetical projects. These hypothetical projects include a 1-acre, multi-family, residential project that may be typical in the more developed portions of the OMCP area and the development of a large-scale project that would occur in the undeveloped portions of the OMCP area. Construction emissions associated with these two hypothetical projects are summarized in Table 4. In the case of the Specific Plan, the large-scale project would be more representative. It was found that emissions due to construction of a large-scale project would be less than the applicable thresholds for all criteria pollutants.

Table 4 Sample Daily Construction Emissions (pounds per day)			
Pollutant	Small Project	Large Project	Threshold
ROG	76	90	137
NO_X	45	111	250
CO	27	59	550
SO_2	0	0	250
PM_{10}	8	23	100
$PM_{2.5}$	5	15	100[1]

SOURCE: City of San Diego 2013
Note: Construction emissions were calculated as part of the FEIR using an older version of CalEEMod with construction beginning in 2011. Due to implementation of statewide regulations related to construction equipment and development of newer emission control technologies, emissions generated by current construction equipment would be less than those previously calculated. These are therefore conservative calculations.

Although anticipated construction emissions associated with Specific Plan buildout are not anticipated to exceed construction emission thresholds; at a program level of review, specific grading quantities and construction plans are not available. Therefore, as future development is proposed, air quality modeling would be required to verify construction emissions for individual projects.

6.1.2 Project-level Analysis

Project-level components of the Specific Plan include Phase 1 of the residential development including infrastructure to support Phase 1. Implementation of Phase 1 would include development of up to 920 multi-family (detached and attached) residential units. The supporting infrastructure would include construction of Beyer Boulevard and Caliente Avenue along with water and sewer infrastructure improvements and construction of the southern EVA road. The project-level component also includes Phase 2 and Phase 4 rough grading areas to provide balanced grading. Section 6.1.2.1 identifies CalEEMod calculations for construction of 920 residential units, including on-site infrastructure, trails, a temporary pump station/sewer lift station associated with Phase 1a, and all grading components for all areas identified within the project-level analysis area in Figure 5. RCEM construction emission calculations associated with Beyer Boulevard, Caliente Avenue, and other water, sewer and transportation infrastructure improvements are reported in Section 6.1.2.2. A discussion of other minor construction activity is provided in Section 6.1.2.3, and total project-level construction emissions are presented in Section 6.1.2.4.

6.1.2.1 Planning Areas 8 through 14 Construction Activities

Project-level construction activities were modeled over a two-year period beginning in January 2025. Construction is likely to start after January 2025; however, modeling construction with a start year of 2025 is conservative since construction equipment gets cleaner over time due to implementation of statewide regulations. CalEEMod inputs for the project-level construction emissions associated with Planning Areas 8 through 14 include the following:

- Land Use: 778 multi-family units, 142 single family units, 5,000 square feet pump station/sewer lift station, 32.1 acres paved surfaces.
- Grading Quantities: 1,936,352 cubic yards of cut and 1,850,224 cubic yards of fill. These grading quantities include all project-level areas including construction of the off-site portion of Beyer Boulevard (discussed further under Section 6.1.2.2) in addition to grading volumes associated with Phase 2, the EVA road and Phase 4 areas.
- Export of approximately 86,128 cubic yards of soils for placement within the additional grading areas southeast of the VTM in Phase 2, the EVA road, or Phase 4 areas. Emissions due to soil hauling during grading were modeled using the default CalEEMod truck capacity and a trip length of 0.5 mile since all exported soils would be placed within the project area.
- Construction Equipment: The CalEEMod default amount of construction equipment was doubled to provide a conservative analysis with a shortened two year construction period.
- Trip Generation: 10 weekday trips per single family unit, 8 weekday trips per multi-family unit with a density less than 20 dwelling units per acre, 6 weekday trips per multi-family unit with a density greater than 20 dwelling units per acre. Weekday trip generation rates were calculated by proportionately adjusting the CalEEMod default Saturday and Sunday trip generation rates.
- No woodstoves or fireplaces.
- All other default CalEEMod parameters were modeled.

Table 5 shows the total projected construction maximum daily emission levels for each criteria pollutant during each year of construction of Planning Areas 8 through 14. These emissions are considered worst-case emission estimates because the they account for all project-level grading activities described in Section 2.2. Due to grading cut and fill volumes being used to balance grading within various phases, overall grading volumes of 1,936,352 cubic yards of cut, 1,850,224 cubic yards of fill, and 86,128 cubic yards of export are evaluated, which includes grading within Phase 1 areas, the Beyer Boulevard extension, the EVA road, off-site improvement areas, and rough grading within Phase 2 and Phase 4. Further, the evaluation is conservative because it assumes all emissions occur within a two-year time frame, while overall grading for all phases would likely occur over a longer period, which would reduce the intensity of emissions. The CalEEMod output files for the project-level construction emissions are contained in Attachment 2.

Table 5
Summary of Maximum Daily Project-level Construction Emissions – Planning Area 8 through 14 Construction and Project-level Grading Areas
(pounds per day)

Year	Emissions					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2025	7	80	72	<1	18	10
2026	37	27	62	<1	8	2
Maximum Daily Emissions	**37**	**80**	**72**	**<1**	**18**	**10**
Significance Threshold	*137*	*250*	*550*	*250*	*100*	*67*

6.1.2.2 Other Facility Improvements

Construction emissions associated with other required facility improvements include the construction of Beyer Boulevard from Enright Drive to the future extension of Caliente Avenue, Caliente Avenue from the southern terminus to Beyer Boulevard, widening the SR-905 westbound on-ramp at Caliente Avenue, and water and sewer infrastructure outside of the Specific Plan area. Emissions due to construction of these components were calculated RCEM because RCEM is a linear construction model that provides a better estimate of the types and amounts of construction equipment and activities needed for these types of projects. RCEM inputs for the project-level construction emissions associated with these linear construction activities include the following:

- Beyer Boulevard and Caliente Avenue
  - Linear Project Type: New road construction
  - Construction start date and duration: January 2025, one year
  - Total Roadway Length: A 1.1-mile segment of Beyer Boulevard and 0.5-mile segment of Caliente Avenue would be constructed. A 2.0-mile segment was modeled to be conservative.
  - Construction Equipment: The RCEM default amount of construction equipment was modeled.
  - Grading Quantities: All project-level grading activities including those associated with Beyer Boulevard and Caliente Avenue were accounted for in the CalEEMod modeling discussed above.
- SR-905 Ramp Widening
  - Linear Project Type: Road widening
  - Construction start date and duration: January 2025, six months
  - Total Roadway Length: 0.15 mile
  - Construction Equipment: The RCEM default amount of construction equipment was modeled.
  - Grading Quantities: Not applicable
- Sewer and Water Pipelines
  - Linear Project Type: Other linear project (pipeline)
  - Construction start date and duration: January 2025, one year

- Total Roadway Length: 5,176 linear feet (0.98 mile) sewer pipelines and 4,987 linear feet (0.94 mile) for a total of 1.92 miles.
- Construction Equipment: The RCEM default amount of construction equipment was modeled.
- Export Quantities: Excavated soil would be backfilled and not require export. An asphalt removal width of six feet and thickness of six inches along the entire pipeline length modeled. It was assumed this asphalt would be removed from the site during the land clearing phase with a default round trip length of 30 miles.

- EVA Road
  - Linear Project Type: New road construction
  - Construction start date and duration: January 2025, six months
  - Total Roadway Length: 0.5 mile
  - Construction Equipment: The RCEM default amount of construction equipment was modeled.
  - Grading Quantities: All project-level grading activities including those associated with the EVA road were accounted for in the CalEEMod modeling discussed above.

Beyer Boulevard would extend approximately 1.1 miles from Enright Avenue to Caliente Avenue, and Caliente Avenue would extend approximately 0.5 mile from the southern terminus to Beyer Boulevard. These roadways would need to be constructed to provide access to the Phase 1 residential units. The construction of all other Phase 1 internal streets is accounted for in the Planning Area 8 through 14 construction calculations provided above. Construction of Beyer Boulevard and Caliente Avenue was modeled over a one-year period concurrent with Phase 1 construction activities described in Section 6.1.2.1. Default RCEM phase lengths, equipment, and worker trips were modeled. These emission calculations account for all water and sewer infrastructure that would be located within the right-of-way. The results are summarized in Table 6. RCEM input and output data is provided in Attachment 3.

Table 6
Maximum Daily Construction Emissions – Beyer Boulevard and Caliente Avenue
(pounds per day)

Phase	Pollutant					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Grubbing/Land Clearing	1	7	7	<1	10	2
Grading/Excavation	4	33	37	<1	11	3
Drainage/Utilities/Sub-Grade	3	29	32	<1	11	3
Paving	1	12	18	<1	1	1
Maximum Daily Emissions	**4**	**33**	**37**	**<1**	**11**	**3**
Significance Threshold	*137*	*250*	*550*	*250*	*100*	*67*

Widening of approximately 775 linear feet of the westbound SR-905 on-ramp at Caliente Avenue is required to ensure adequate roadway operations with implementation of Phase 1 of the project. SR-905 on-ramp widening was modeled over a six-month period concurrent with all other project-level construction activities. Default RCEM phase lengths, equipment, and worker trips were modeled. The results are summarized in Table 7. RCEM input and output data is provided in Attachment 4.

Table 7
Maximum Daily Construction Emissions – SR-905 On-Ramp Widening
(pounds per day)

Phase	Pollutant					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Grubbing/Land Clearing	1	7	9	<1	3	1
Grading/Excavation	4	38	42	<1	4	2
Drainage/Utilities/Sub-Grade	2	22	27	<1	3	1
Paving	1	10	17	<1	1	<1
Maximum Daily Emissions	**4**	**38**	**42**	**<1**	**4**	**2**
Significance Threshold	*137*	*250*	*550*	*250*	*100*	*67*

Water and sewer infrastructure outside the Specific Plan area would include the construction of approximately 5,176 linear feet of sewer pipelines and 4,987 linear feet of water pipelines. Note that water and sewer infrastructure within Planning Area 8 through 14 development areas are accounted for in the CalEEMod emission calculations provided in Table 5, and the water and sewer infrastructure within the Beyer Boulevard and Caliente Avenue extensions are accounted for in the RCEM emission calculations provided in Table 8. A 16-inch water line connection would extend west within existing Beyer Boulevard in San Ysidro and north within Otay Mesa Road and Otay Mesa Place connecting to the Princess Park Pump Station located at 1740 Masterson Lane. Sewer line improvements would require construction of a pipeline within East Beyer Boulevard and Center Street connecting to existing sewer lines. Construction of water and sewer lines would require installation using a backhoe straddling the new pipeline installation trench, requiring a disturbance width of 20 feet along pipeline installation locations. Sewer and water pipeline construction was modeled over a one-year period concurrent with all other project-level construction activities. Default RCEM phase lengths, equipment, and worker trips were modeled. Calculations include the export associated with asphalt removal. The results are summarized in Table 8. RCEM input and output data is provided in Attachment 5.

Table 8
Maximum Daily Construction Emissions – Sewer and Water Pipelines
(pounds per day)

Phase	Pollutant					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Grubbing/Land Clearing	1	10	11	<1	10	2
Grading/Excavation	4	39	43	<1	12	4
Drainage/Utilities/Sub-Grade	3	24	29	<1	11	3
Paving	1	12	18	<1	1	<1
Maximum Daily Emissions	**4**	**39**	**43**	**<1**	**12**	**4**
Significance Threshold	*137*	*250*	*550*	*250*	*100*	*67*

Construction of a southern EVA road would occur prior to occupancy of the 200th unit. EVA road construction was modeled over a six-month period concurrent with all other project-level construction activities. Default RCEM phase lengths, equipment, and worker trips were modeled. The results are summarized in Table 9. RCEM input and output data is provided in Attachment 6.

Table 9 Maximum Daily Construction Emissions – EVA Road (pounds per day)						
Phase	Pollutant					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Grubbing/Land Clearing	1	6	6	<1	10	2
Grading/Excavation	3	33	36	<1	11	3
Drainage/Utilities/Sub-Grade	3	28	31	<1	11	3
Paving	1	11	17	<1	1	<1
Maximum Daily Emissions	**3**	**33**	**36**	**<1**	**11**	**3**
Significance Threshold	*137*	*250*	*550*	*250*	*100*	*67*

6.1.2.3 Minor Construction Activities

There would be minor construction activities associated with other project-level components including trail construction and restoration efforts. These activities would involve minor grading contouring in the vernal pool preserve and small equipment or hand tools used to implement restoration activities. Emissions associated with these activities would be minimal and would be performed with construction equipment already accounted for in the emission calculations above. They would not result in an increase in emissions presented in Section 6.1.2.4 below.

6.1.2.4 Total Project-level Construction Emissions

Table 10 summarizes the maximum combined project-level construction emissions.

Table 10 Maximum Daily On-site and Off-site Construction Emissions (pounds per day)						
Activity/Phase	Pollutant					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Planning Area 8 - 14 Construction and Project-level Grading Areas Maximum Daily Emissions	37	80	72	<1	18	10
Other Facility Improvements Maximum Daily Emissions	15	144	157	<1	38	12
Beyer Boulevard/Caliente Avenue	*4*	*33*	*37*	*<1*	*11*	*3*
SR-905 On-Ramp	*4*	*38*	*42*	*<1*	*4*	*2*
Sewer/Water Pipelines	*4*	*39*	*43*	*<1*	*12*	*4*
EVA Road	*3*	*33*	*36*	*<1*	*11*	*3*
Maximum Daily Emissions	**52**	**224**	**229**	**<1**	**57**	**23**
Significance Threshold	*137*	*250*	*550*	*250*	*100*	*67*

As shown, the total project-level construction emissions are projected to be less than the applicable significance thresholds for all criteria pollutants. Note that this is a conservative analysis that assumed separate construction fleets would be used for all construction activities and that all construction activities would occur simultaneously.

6.2 Operation Emissions

Operation emissions are long-term and include mobile and area sources. Sources of operational emissions associated with Specific Plan include:

- Traffic generated by the project; and
- Area source emissions from the use of consumer products, as well as applying architectural coatings and landscaping activities.

This analysis considers program-level emission estimates associated with buildout of the entire Specific Plan as well as project-level emissions associated with buildout of the VTM and associated project-level components.

6.2.1 Program-level Analysis

Specific Plan program-level air emissions would exceed the City's project-level thresholds; however, project-level standards are not appropriate for a program-level analysis, as the thresholds are conservative and intended to ensure that multiple simultaneous individual projects would not obstruct the timely attainment of the NAAQS and CAAQS. Generally, discretionary, program-level planning activities, such as general plans, community plans, specific plans, etc., are evaluated for consistency with the local air quality plan. In contrast, project-level thresholds are applied to individual project-specific approvals. Therefore, unlike the project-level analysis, the analysis of the Specific Plan is based on the future emissions estimates and determining whether the change in operational emissions are significant based on their relationship to attainment strategies derived from the adopted land use plan for the Specific Plan area, which in this case is the adopted land uses in the OMCP.

At the program level, the analysis considers emissions from buildout of the Specific Plan in relation to the adopted land uses in the OMCP to determine if the emissions would exceed the emissions estimates included in the RAQS. If such an exceedance occurs, then the proposed Specific Plan would obstruct attainment or result in an exceedance of the AAQS and could cause the temporary or permanent exposure of persons to unhealthy concentrations of pollutants. As such, the analysis evaluates the potential for future development within the Specific Plan area to result in, or contribute to, a violation of any air quality standard, based on a comparison of the total change in pollutant emissions projected to result from buildout of the OMCP land uses in the year 2035 to buildout of Specific Plan in the year 2035, and determines whether the total change in emissions is significant.

According to the program-level vehicle miles travelled (VMT) analysis, the Specific Plan would generate a net total of 57,225 average daily trips while the OMCP land uses for the same area would generate 64,393 average daily trips (LOS Engineering, Inc. 2025). Weekend trip generation rates were calculated by proportionately adjusting the default CalEEMod trip rates. CalEEMod default trip lengths were modeled utilizing default vehicle emission factors based on CARB's 2021 Emissions FACtor model.

Area source emissions associated with the project include consumer products, natural gas used in space and water heating, architectural coatings, and landscaping equipment. Hearths (fireplaces) and woodstoves are also a source of area emissions; however, the project would not include hearths or woodstoves. Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents, cleaning compounds, polishes, floor finishes, disinfectants, sanitizers, and aerosol paints but not including other paint products, furniture coatings, or architectural coatings. Emissions due to consumer products are calculated using total building area and product emission factors. Emissions are generated from the combustion of natural gas used in space and water heating. However, the applicant would use all electric appliances to further reduce emissions.

For architectural coatings, emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. Emissions are based on the building surface area, architectural coating emission factors, and a reapplication rate of 10 percent of area per year. Landscaping maintenance includes fuel combustion emission from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers as well as air compressors, generators, and pumps. Emission calculations take into account building area, equipment emission factors, and the number of operational days (summer days).

Table 11 summarizes the adopted and proposed land uses and trip generation for the Specific Plan area, and Table 12 summarizes the estimated total maximum operational emissions for the Specific Plan area. CalEEMod output for the Specific Plan is contained in Attachment 1. CalEEMod output for the adopted land uses is contained in Attachment 7. As shown, operational emissions associated with the Specific Plan would be less for all pollutants when compared to the adopted OMCP land uses for the same area.

Table 11
Adopted and Proposed Specific Plan Land Uses and Traffic Comparison

Land Use	Otay Mesa Community Plan Adopted Land Uses		Proposed Specific Plan	
	Amount	ADT	Amount	ADT
Single-Family	1,400 units	14,000	1,158 units	11,580
Multi-Family (under 20 du/acre)	2,240 units	17,920	2,503 units	20,024
Multi-Family (over 20 du/acre)	2,240 units	13,440	1,469 units	8,814
School	1,268 students	3,677	1,268 students	3,677
Parks	40 acres	2,000	17.6 acres	880
Commercial	190,800	13,356	175,000 sq. ft.	12,250
Total		**64,393**		**57,225**

SOURCE: LOS Engineering, Inc. 2025
du/acre = dwelling units per acre; ADT = average daily traffic; sq. ft. = square feet

Table 12 Total Maximum Operational Emissions for the Specific Plan							
		Pollutant (pounds per day)					
Condition	Source	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Winter							
OMCP Adopted Land Uses	Mobile	194	121	1,290	4	375	97
	Area	170	<1	<1	<1	<1	<1
	Energy	<1	1	1	<1	<1	<1
	Total	**364**	**122**	**1,291**	**4**	**375**	**97**
Proposed Specific Plan	Mobile	168	104	1,111	3	322	83
	Area	148	<1	<1	<1	<1	<1
	Energy	<1	1	1	<1	<1	<1
	Total	**315**	**105**	**1,112**	**3**	**323**	**83**
Change		*-49*	*-16*	*-179*	*-1*	*-53*	-14
Summer							
OMCP Adopted Land Uses	Mobile	196	110	1,366	4	375	97
	Area	201	3	348	<1	<1	<1
	Energy	<1	1	1	<1	<1	<1
	Total	**397**	**114**	**1,715**	**4**	**376**	**97**
Proposed Specific Plan	Mobile	169	95	1,176	3	322	83
	Area	175	3	305	<1	<1	<1
	Energy	<1	1	1	<1	<1	<1
	Total	**344**	**98**	**1,481**	**3**	**323**	**83**
Change		*-53*	*-16*	*-234*	*-1*	*-53*	-14
Project level Significance Threshold		*137*	*250*	*550*	*250*	*100*	*67*
OMCP = Otay Mesa Community Plan							

It should be noted that the Specific Plan would also include two permanent sewer lift stations (see Figure 7). These sewer lift stations were modeled as light industrial land uses in CalEEMod. The lift stations would include an emergency backup generator that would require periodic and short-term testing and would be a stationary source emission. However, operation of emergency backup generators is regulated by and would require a stationary source permit from the SDAPCD and would thus be subject to regulatory oversight limiting emissions. The pumps located within the lift stations would be electric and would not be a significant source of emissions. The lift stations would also require periodic vehicle trips associated with maintenance; however, these would be minimal and would not result in an increase in the mobile emissions reported in Table 12.

6.2.2 Project-level Analysis

Project-level operational emissions modeling included 920 residential units (142 multi-family detached units evaluated as single-family and 778 multi-family attached units evaluated as mid-rise apartments), two temporary sewer lift stations, and approximately 32.1 acres of paved roads. Project-level operational emissions were compared to the City's project-level thresholds (see Table 3) to determine the significance of air quality impacts.

According to the project-level Local Mobility Analysis, the project-level components would generate 7,084 average daily weekday trips (LOS Engineering, Inc. 2025). Operational emissions were modeled using the same trip length and area source parameters discussed for the program-level. Weekend trip generation rates were calculated by proportionately adjusting the default CalEEMod trip rates. CalEEMod default trip lengths and default vehicle emission factors based on CARB's 2021 Emissions FACtor model were modeled. There would be no woodburning fireplaces or stoves, or natural gas appliances associated with the Phase 1 residential development area, as detailed in Section 2.2.6. All other default area and energy source parameters were modeled.

Table 13 provides a summary of the operational emissions generated by the project. Emissions from residential uses would include mobile sources and area sources (landscape equipment, consumer products, and architectural coatings). The temporary sewer pump station was modeled as an industrial land use. Emissions associated with the pump station would include area sources (landscape equipment) and minimal energy sources (natural gas consumption). CalEEMod output files for project-level operation are contained in Attachment 2. As shown, project-level generated emissions are projected to be less than the City's project-level significance thresholds for all criteria pollutants.

Table 13
Summary of Project-level Operational Emissions
(pounds per day)

Source	Emissions					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Winter						
Mobile Sources	28	21	189	<1	42	11
Area Sources	24	<1	<1	<1	<1	<1
Energy Sources	<1	<1	<1	<1	<1	<1
Total	**52**	**21**	**189**	**<1**	**42**	**11**
Summer						
Mobile Sources	28	19	200	<1	42	11
Area Sources	29	1	52	<1	<1	<1
Energy Sources	<1	<1	<1	<1	<1	<1
Total	**57**	**20**	**252**	**<1**	**42**	**11**
Project level Significance Threshold	*137*	*250*	*550*	*250*	*100*	*67*

6.3 Program-level Impact Analysis

6.3.1 Plan Consistency

The RAQS is the applicable regional air quality plan that sets forth the SDAPCD's strategies for achieving the NAAQS and CAAQS. The SDAB is designated non-attainment for the federal and state ozone standard. Accordingly, the RAQS was developed to identify feasible emission control measures and provide expeditious progress toward attaining the standards for ozone. The two pollutants addressed in the RAQS are ROG and NO_X, which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and growth create challenges in controlling emissions and by extension to maintaining and improving air quality. The RAQS, in conjunction with the TCM, were most recently adopted in 2022 as the air quality plan for the region.

The growth projections used by the SDAPCD to develop the RAQS emissions budgets are based on the population, vehicle trends, and land use plans developed in general plans and used by SANDAG in the development of the regional transportation plans and sustainable communities strategy. As such, projects that propose development that is consistent with the growth anticipated by SANDAG's growth projections and/or the general plan would not conflict with the RAQS. In the event that a project would propose development that is less dense than anticipated by the growth projections, the project would likewise be consistent with the RAQS. In the event a project proposes development that is greater than anticipated in the growth projections, further analysis would be warranted to determine if the project would exceed the growth projections used in the RAQS for the specific subregional area.

The OMCP FEIR determined that development occurring as a result of plan buildout would not obstruct or conflict with the implementation of the San Diego RAQS or applicable portion of the SIP, as the changes in land uses under the OMCP and the associated traffic generation would result in fewer emissions than the previously adopted community plan upon which the RAQS was based, resulting in a less than significant impact.

Table 11 summarizes the adopted and proposed land use designations for the Specific Plan area. As shown, the Specific Plan would decrease the number of residential units, park space, and commercial uses and provide the same amount of school space. Overall, the Specific Plan would slightly decrease the development potential in the Specific Plan area. As a result, as shown in Table 12, operational emissions associated with the Specific Plan would be less than those associated with the adopted land uses for all criteria pollutants. Thus, because implementation of the Specific Plan land uses would not result in an effective increase in operational emissions, the Specific Plan would be consistent with assumptions contained in the RAQS. Therefore, the Specific Plan, including the project-level components as discussed in Section 6.4, would not obstruct or conflict with implementation of the RAQS, and impacts would be less than significant.

6.3.2 Criteria Pollutants

As discussed in Section 6.1.1, construction emissions associated with future development implemented under the Specific Plan are not anticipated to exceed the applicable regional emissions thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. Therefore, as project construction emissions would be below these limits, project construction would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations. As discussed in Section 3.4, the OMCP FEIR provides a Mitigation Framework for projects that would result in construction emissions that exceed the applicable thresholds (OMCP Mitigation Framework AQ-1). Although it is not anticipated that construction emissions would exceed the applicable thresholds, because the exact construction schedule and details are not known for future development implemented under the Specific Plan, OMCP Mitigation Framework AQ-1 would be carried forward for future development. It is not known at the program level if implementation of AQ-1 would reduce emissions to a level that is less than significant. As with the FEIR, impacts would remain significant and unavoidable.

Long-term emissions of regional air pollutants occur from operational sources. As shown in Table 12, total operational emissions associated with buildout of the Specific Plan would exceed the project-level significance thresholds for ROG, CO, and PM_{10}. Therefore, new development within the Specific Plan would result in operational emissions that could create emission levels that would exceed State and federal air quality standards and constitute a significant impact. As discussed in Section 3.4, the OMCP FEIR provides Mitigation Framework AQ-2 for projects that would result in operational emissions that exceed the applicable thresholds. Mitigation Framework AQ-2 would be carried forward to future development within the Specific Plan. However, it is not known at the program level if implementation of AQ-2 would reduce emissions to a level that is less than significant. As with the FEIR, impacts would remain significant and unavoidable.

6.3.3 Cumulative Emissions

The region is classified as an attainment area for all criterion pollutants except ozone, PM_{10}, and $PM_{2.5}$. The SDAB is a non-attainment area for the 8-hour federal and state ozone standards. Ozone is not emitted directly, but is a result of atmospheric activity on precursors. NO_X and ROG are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone. $PM_{2.5}$ includes fine particles that are found in smoke and haze, and are emitted from all types of combustion activities (motor vehicles, power plants, wood burning, etc.) and certain industrial processes. PM_{10} includes both fine and coarse dust particles, and sources include crushing or grinding operations and dust from paved or unpaved roads.

As discussed, construction emissions are not projected to exceed the applicable emissions thresholds. Nonetheless, due to the unknown construction schedules and details, construction activities could generate criteria pollutants in exceedance of thresholds that the SDAB is in non-attainment (PM_{10} and $PM_{2.5}$), which would be a potentially significant cumulative impact. The OMCP Mitigation Framework AQ-1 would be carried forward for future development. It is not known at the program level if implementation of AQ-1 would reduce construction emissions of (PM_{10} and $PM_{2.5}$) to a level that is less than significant. As with the FEIR, impacts would remain significant and unavoidable.

In addition, total operational emissions associated with buildout of the Specific Plan would exceed the project-level significance thresholds for ROG (an ozone precursor), CO, and PM_{10}. As discussed in Section 3.4, the OMCP FEIR provides a Mitigation Framework AQ-2 for projects that would result in operational emissions that exceed the applicable thresholds. Mitigation Framework AQ-2 would be carried forward to future development within the Specific Plan. However, it is not known at the program level if implementation of AQ-2 would reduce emissions to a level that is less than significant.

Overall, as with the OMCP FEIR, new development within the Specific Plan would result in a cumulatively considerable net increase in non-attainment criteria pollutants for construction and operations, and impacts would be significant. This finding would be consistent with the findings of the OMCP FEIR.

6.3.4 Exposure of Sensitive Receptors

Sensitive land uses include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities. Sensitive receptors near the project site include existing residential uses and a school to the north. Additionally, as development within the Specific Plan area is phased, the project would construct residential and school uses that could be occupied as construction activities in the Specific Plan continue.

Diesel Particulate Matter–Construction

Construction of the project would result in short-term diesel exhaust emissions from heavy-duty equipment. Project construction would result in the generation of DPM emissions from the use of off-road diesel construction equipment required for site grading and earthmoving, trenching, asphalt paving, and other construction activities. Other construction-related sources of DPM include material delivery trucks and construction worker vehicles; however, these sources are minimal relative to construction equipment. Not all construction worker vehicles would be diesel-fueled and most DPM emissions associated with material delivery trucks and construction worker vehicles would occur off-site.

For the purposes of this analysis, PM_{10} exhaust emissions from CalEEMod were used to estimate DPM emissions. Based on project-level construction emission calculations, buildout of the Specific Plan would result in a maximum of 0.17 ton per year of exhaust PM_{10}. This is based on year 2025 PM_{10} exhaust emissions which would be reduced over time due to implementation of statewide regulations that result in cleaner construction fleets. Thus, using this annual emission rate is conservative. AERSCREEN assumes an emission source is continuous for a 24-hour period (actual emissions would vary over an approximate 8-hour construction day and would cease outside of construction hours, however, average exposure over a 24-hour period was evaluated because health risk is based on exposure over time). Therefore, the total annual emissions were converted to an emission rate of 0.0048 grams per second. Emissions were conservatively assessed over a 20-year exposure period. AERSCREEN calculates a worst-case maximum 1-hour concentration at a specific distance and specific angle from the source. The maximum 1-hour concentration is then converted to an annual concentration using a 0.08 conversion factor (U.S. Environmental Protection Agency [U.S. EPA] 1992). The annual concentration was then used to calculate the excess cancer risk associated with exposure to construction DPM.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups: third trimester of pregnancy, 0<2, 2<9, 2<16, 16<30 and 16–70 years. The equation for dose through inhalation (Dose-air) is as follows:

Dose-air = (C_{air} x DBR × A × EF × 10^{-6});
Where:

Dose-air	=	Chronic daily intake, mg/kg/d
C_{air}	=	Ground-level concentration of toxic air contaminants to which the receptor is exposed, micrograms/cubic meter
DBR	=	Daily breathing rate, normalized to body weight (liters per kilogram body weight per day (OEHHA 2022)
A	=	Inhalation absorption factor (OEHHA recommended factor of 1)
EF	=	Exposure frequency, days/year (OEHHA recommended factor of 0.96 for resident and 0.68 for workers)

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. The excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. The worst-case cancer risk is calculated as follows:

Excess Cancer Risk = Dose-air × CPF × ASF × ED/AT × FAH;
Where:

Dose-air	=	Chronic daily intake, mg/kg body weight per day
CPF	=	Cancer potency factor (mg/kg/d)
ASF	=	Age sensitivity factor
ED	=	Exposure duration (years)
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time at home

Non-cancer risks are defined as chronic or acute. With respect to DPM only chronic risks are calculated and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its chronic Reference Exposure Levels. Where the total equals or exceeds one, a health hazard is presumed to exist.

In this analysis, non-carcinogenic impacts are evaluated for chronic exposure inhalation exposure. Estimates of health impacts from non-carcinogenic concentrations are expressed as a hazard quotient (HQ) for individual substances, such as diesel particulate. An HQ of one or less indicates that adverse health effects are not expected to result from exposure to emissions of that substance. Reference Exposure Levels are defined as the concentration at which no adverse health effects are anticipated. Generally, the inhalation pathway is the largest contributor to the total dose. The HQ is calculated with the flowing equation:

$$HQ = \text{Ground-Level Concentration } (\mu g/m^3)/\text{Reference Exposure Level } (\mu g/m^3)$$

It should also be noted that all construction equipment is subject to the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation. This regulation, which applies to all off-road diesel vehicles 25 horsepower or greater, limits unnecessary idling to five minutes, requires all construction fleets to be labeled and reported to CARB, bans Tier 0 equipment and phases out Tier 1 and 2 equipment (thereby replacing fleets with cleaner equipment), and requires that fleets comply with Best Available Control Technology requirements.

Based on AERSCREEN modeling results, the maximum 1-hour ground-level DPM concentration from construction activities would be 0.0102 micrograms per cubic meter ($\mu g/m^3$). This was converted to an annual average concentration of 0.000816 $\mu g/m^3$ using a conversion factor of 0.08 (U.S. EPA 1992). The resulting annual concentration was used in the equations discussed above. Using this methodology, it was calculated that the excess cancer risk would be less than one in a million. AERSCREEN and cancer risk calculations are provided in Attachment 8. DPM generated by Specific Plan construction is not expected to create conditions where the probability is greater than 10 in 1 million of contracting cancer, which is the threshold utilized in the OMCP FEIR. Additionally, the HQ would be 0.0002, which is less than one. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations associated with diesel particulate matter during construction that could result in excess cancer risks, and impacts would be less than significant. The OMCP FEIR did not address health risks associated with construction equipment DPM. However, as discussed in Section 3.4, the OMCP FEIR Mitigation Framework AQ-4 requires health risk assessments to be completed for certain projects to ensure sensitive receptors are not exposed to significant pollutant concentrations. As demonstrated in this analysis, program-level construction activities would not expose sensitive receptors to cancer risks in excess of 10 in a million or non-cancer risks greater than one. Therefore, this finding is consistent with the OMCP FEIR.

Diesel Particulate Matter – Freeway

In April 2005, CARB published the Air Quality and Land Use Handbook: A Community Health Perspective (CARB 2005). The handbook includes recommendations directed at protecting sensitive land uses from air pollutant emissions while balancing a myriad of other land use issues (e.g., housing, transportation needs, economics, etc.). The handbook is not regulatory or binding on local agencies and application of the recommendations should use a qualitative approach. As reflected in the CARB Handbook, there is currently no adopted standard for the significance of health effects from mobile sources. Therefore, the CARB has provided guidelines for the siting of land uses near heavily traveled roadways. Of pertinence to this study, the CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles per day should be avoided when possible. However, the project site is located more than 500 feet from Interstate 805 and State Route 905. Roadways within 500 feet of the project site would carry well less than 100,000 vehicles per day. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations from heavily traveled roadways. As discussed in Section 3.4, the OMCP FEIR provides Mitigation Framework AQ-4 for projects that would site a sensitive receptor within 500 feet of a freeway or heavily traveled roadway. Because the Specific Plan area is more than

500 feet from Interstate 805 and State Route 905 or any roadway with over 100,000 vehicles per day, Mitigation Framework AQ-4 would not apply for this issue.

Carbon Monoxide Hot Spots

A CO hot spot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. CO hot spots have the potential to violate state and federal CO standards at intersections, even if the broader basin is in attainment for federal and state levels. The California Department of Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) screening procedures have been utilized to determine if the project could potentially result in a CO hot spot (U.C. Davis Institute of Transportation Studies 1997). As indicated by the CO Protocol, CO hot spots occur nearly exclusively at signalized intersections operating at level of service (LOS) E or F. Accordingly, the CO Protocol recommends detailed air quality dispersion modeling for projects that may worsen traffic flow at any signalized intersections operating at LOS E or F.

Due to increased requirements for cleaner vehicles, equipment, and fuels, CO levels in the state have dropped substantially. All air basins are attainment or maintenance areas for CO. Therefore, more recent screening procedures based on more current methodologies have been developed. The SMAQMD developed a screening threshold in 2011, which states that any project involving an intersection experiencing 31,600 vehicles per hour or more will require detailed analysis. In addition, the Bay Area Air Quality Management District developed a screening threshold in 2010, which states that any project involving an intersection experiencing 44,000 vehicles per hour would require detailed analysis. This analysis conservatively assesses potential CO hot spots using the SMAQMD screening threshold of 31,600 vehicles per hour.

Based on the CO hot spot analysis contained in the Otay Mesa CPU FEIR, buildout of the CPU would not result in CO concentrations that exceed the ambient air quality standards, and would therefore not result in a CO hot spot. As shown in Table 11, the Specific Plan would generate less traffic when compared to the adopted land uses. Thus, intersection volumes would be less than those modeled in the CO hot spot analysis. In conclusion, the Specific Plan would not result in a CO hot spot. Additionally, based on SANDAG's transportation forecast (SANDAG 2022) and the Specific Plan buildout volumes provided in the VMT analysis (LOS Engineering, Inc. 2025), peak hour volumes which are estimated to be approximately 10 percent of the ADT would be well less than 31,600 vehicles per hour. Therefore, the project is not anticipated to result in a CO hot spot and impacts related to CO hot spots would be less than significant. This conclusion is consistent with the OMCP FEIR conclusions.

Stationary Sources

CARB provides guidance on siting land uses near major emitters or facilities of concern. These facilities include distribution centers, chrome platers, dry cleaners using perchloroethylene is, and large gas stations. CARB siting constraints as documented in the OMCP FEIR Table 5.3-7 are summarized in Table 14.

Table 14 California Air Resources Board Land Use Siting Constraints	
Source Category	Recommended Buffer Distances (feet)
Distribution centers (that accommodate more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week)	1,000
Chrome platers	1,000
Dry cleaners using perchloroethylene (1 machine)	300
Dry cleaners using perchloroethylene (2 machines)	500
Dry cleaners using perchloroethylene (3 or more machines)	Requires consultation with Air Pollution Control District
Large gas station (3.6 million gallons or more per year)	300
Other gas stations	50
SOURCE: CARB 2005.	

As discussed in Section 3.4, the OMCP FEIR provides a Mitigation Framework for projects that would include or site a sensitive receptor within the buffer distances of one of the stationary sources identified in Table 14 (see Mitigation Framework AQ-3 and AQ-4).

The Specific Plan is not located in the vicinity of the sources included in Table 14. However, the Specific Plan anticipates residential, school, park, and commercial uses. While the commercial uses are anticipated to be a neighborhood shopping center consisting of uses such as a grocery store and coffee shop and other retail uses; there is a potential for a dry cleaner or gas station to be sited within the Specific Plan commercial core. Should a gas station, dry cleaner, or other use identified in Table 14 be proposed within the Specific Plan area, a significant impact related to exposure of sensitive receptors could occur, resulting in a significant impact. To mitigate for this potential impact, Mitigation Framework AQ-3 and AQ-4 would be required and carried forward for the program-level analysis area. These measures would require an analysis demonstrating that the facility would not expose sensitive receptors to substantial pollutant concentrations. While the Mitigation Framework would reduce the potential impacts associated with exposure to air toxics, no specific projects or improvements have been proposed as part of the Specific Plan, and it cannot be determined whether the proposed mitigation would reduce all impacts to below a level of significance. Therefore, as with the OMCP FEIR, impacts related to exposure to air toxics would be considered significant and unavoidable at the program level.

6.3.5 Odors

The project does not include heavy industrial or agricultural uses that are typically associated with odor complaints. During construction, diesel equipment may generate some nuisance odors. Sensitive receptors near the project site residential uses and a school; however, exposure to odors associated with project construction would be short term and temporary in nature. The two proposed sewer lift stations required to serve the Specific Plan area would be located within enclosed structures that would be equipped with proper odor control systems and scrubber fans, as these components are standard industry requirements to ensure odor management in accordance with the SDAPCD Rule 51. All potentially odorous air from inside the sewer lift station would be treated using proven technology consisting of chemical and/or biological treatment processes before any air is discharged to the atmosphere outside of the sewer lift stations. With full treatment of all potentially odorous air, it is not anticipated that odors would be perceptible off-site. Impacts would be less than significant consistent with the conclusion in the OMCP FEIR.

6.4 Project-level Impact Analysis

6.4.1 Plan Consistency

The project-level components are a part of the Specific Plan. As discussed in Section 6.3, operational emissions associated with the Specific Plan would be less than those associated with the adopted land uses for all criteria pollutants. Thus, because the land use changes associated with the Specific Plan would not result in an effective increase in operational emissions, the Specific Plan would be consistent with assumptions contained in the RAQS. Therefore, the Specific Plan, including the project-level components, would not obstruct or conflict with implementation of the RAQS, and impacts would be less than significant.

6.4.2 Criteria Pollutants

As shown in Table 10, construction emissions associated with implementation of the VTM and associated project-level components, would not exceed the applicable regional emissions thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. Therefore, as project construction emissions would be well below these limits, project construction would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations.

As shown in Table 13, total operational emissions associated with the project-level components operation would not exceed the applicable regional emissions thresholds. Therefore, as project operation emissions would be below these limits, project operation would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations. Therefore, the project would result in a less than significant impact.

As discussed in Section 3.4, the OMCP FEIR provides Mitigation Framework AQ-1 and AQ-2 for projects that would result in emissions that exceed the applicable thresholds. As shown in Tables 10 and 13, emissions associated with the project-level components would be less than the applicable thresholds for all criteria pollutants, and mitigation would not be required.

6.4.3 Cumulative Emissions

The region is classified as an attainment area for all criterion pollutants except ozone, PM_{10}, and $PM_{2.5}$. As discussed above, construction and operational emissions associated with the project-level components would not exceed the applicable emissions thresholds. Therefore, the project-level components would not result in a cumulatively considerable net increase in non-attainment criteria pollutants, and impacts would be less than significant.

6.4.4 Exposure of Sensitive Receptors

Sensitive land uses include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities. Sensitive receptors near the project site include existing residential uses and a school to the north.

Diesel Particulate Matter – Construction

Emissions associated with construction of the project-level components were included in the analysis of Specific Plan construction emissions. As discussed, the excess cancer risk would be less than the screening threshold of 10 in a million, and impacts to sensitive receptors from exposure to construction-related DPM would be less than significant.

Diesel Particulate Matter – Freeway

As discussed in Section 6.3, the project site is located more than 500 feet from Interstate 805 and State Route 905. Roadways within 500 feet of the project site would carry well less than 100,000 vehicles per day. Therefore, the project-level components would not expose sensitive receptors to substantial pollutant concentrations from heavily traveled roadways.

Carbon Monoxide Hot Spots

As the project-level components are within the Specific Plan area, the trips generated by VTM are accounted for in the trips evaluated for the Specific Plan. As discussed in Section 6.3, the peak hour intersection volumes would be well less than 31,600 vehicles per hour. Therefore, the project-level components are not anticipated to result in a CO hot spot.

Stationary Sources

The project-level components are not located in the vicinity of the sources identified in Table 14, and would not include any stationary sources of toxic emissions. Specifically, the project-level components include sensitive receptors, but such uses are not proposed within the identified buffer distances. Therefore, impacts would be less than significant.

6.4.5 Odors

The project-level components do not include heavy industrial or agricultural uses that are typically associated with odor complaints. During construction, diesel equipment may generate some nuisance odors. Sensitive receptors near the project site residential uses and a school; however, exposure to odors associated with project construction would be short term and temporary in nature. The proposed temporary sewer lift station associated with construction of the first 200 units of the VTM would be located within an enclosed building that would be equipped with proper odor control systems and scrubber fans to comply with industry standard requirements for these facilities in accordance with SDAPCD regulations, including Rule 51 regarding nuisance emissions. All potentially odorous air from inside the sewer lift station would be treated using industry standard proven technology consisting of chemical and/or biological treatment processes before any air is discharged to the atmosphere outside of the sewer lift station. With full treatment of all potentially odorous air, it is not anticipated that odors would be perceptible beyond the facility. Impacts would be less than significant.

7.0 Conclusions

7.1 Program-level Analysis

The primary goal of the RAQS is to reduce ozone precursor emissions. The OMCP FEIR determined that development occurring as a result of buildout of the planning area would not obstruct or conflict with the implementation of the San Diego RAQS or applicable portion of the SIP, as the changes in land uses under the OMCP and the associated traffic generation would result in fewer emissions than the previously adopted community plan upon which the RAQS was based, resulting in a less than significant impact. The Specific Plan would decrease the number of residential units, park space, and commercial uses and provide the same amount of school space. Overall, the Specific Plan would slightly decrease the development potential in the Specific Plan area. As a result, as shown in Table 12, operational emissions associated with the Specific Plan would be less than those associated with the adopted land uses for all criteria pollutants. Thus, because implementation of the Specific Plan land uses would not result in an effective increase in operational emissions, the Specific Plan would be consistent with assumptions contained in the RAQS. Therefore, the Specific Plan would not obstruct or conflict with implementation of the RAQS, and impacts would be less than significant.

The OMCP FEIR determined that buildout of the plan would result in construction emissions potentially exceeding standards considering future development construction emissions could not be adequately quantified at the program level. The OMCP FEIR identified a potentially significant construction emission impact and provided Mitigation Framework AQ-1 to reduce construction emissions. As shown in Table 4, construction emissions associated with buildout of the Specific Plan would not exceed the applicable regional emissions thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. Therefore, as project construction emissions would be well below these limits, project construction would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations. However, although it is not anticipated that construction emissions would exceed the applicable thresholds, because the exact construction schedule and details are not known for future development implemented under the Specific Plan, construction emission impacts at the program level would have potential to exceed criteria pollutant thresholds and are considered significant. OMCP FEIR Mitigation Framework AQ-1 would be required for future development in the Specific Plan that would result in construction emissions that exceed the applicable thresholds.

AQ-1: For projects that would exceed daily construction emissions thresholds established by the City, best available control measures/technology shall be incorporated to reduce construction emissions to below daily emission standards established by the City. Best available control measures/technology shall include:

a. Minimizing simultaneous operation of multiple pieces of construction equipment;

b. Use of more efficient, or low pollutant emitting, equipment, e.g., Tier III or IV rated equipment;

c. Use of alternative fueled construction equipment;

d. Dust control measures for construction sites to minimize fugitive dust, e.g., watering, soil stabilizers, and speed limits; and

e. Minimizing idling time by construction vehicles.

However, it is not known at the program level if implementation of Mitigation Framework AQ-1 would reduce emissions to a level that is less than significant. As with the OMCP FEIR, impacts associated with Specific Plan construction emissions would remain significant and unavoidable.

Long-term emissions of regional air pollutants occur from operational sources. The OMCP FEIR determined that operational emissions from the future developments within the CPU area cannot be adequately quantified and would be significant. As shown in Table 12, total operational emissions associated with buildout of the Specific Plan would exceed the project-level significance thresholds for ROG, CO, and PM_{10}. Therefore, new development within the Specific Plan would result in operational emissions that could create emission levels that would exceed state and federal air quality standards and constitute a significant impact. The OMCP FEIR Mitigation Framework AQ-2 would be required for projects that would result in operational emissions that exceed the applicable thresholds.

AQ-2: Development that would significantly impact air quality, either individually or cumulatively, shall receive entitlement only if it is conditioned with all reasonable mitigation to avoid, minimize, or offset the impact. As a part of this process, future projects shall be required to buffer sensitive receptors from air pollution sources through the use of landscaping, open space, and other separation techniques.

However, it is not known at the program level if implementation of Mitigation Framework AQ-2 would reduce emissions to a level that is less than significant. As with the OMCP FEIR, impacts associated with Specific Plan operational emissions would remain significant and unavoidable.

Sensitive receptors near the project site include existing residential uses and a school to the north. Additionally, as development within the Specific Plan area is phased, the project would construct residential and school uses that could be occupied as construction activities in the Specific Plan continue. The OMCP FEIR identified significant impacts associated with the exposure of sensitive receptors to stationary sources of TACs and identifies Mitigation Framework AQ-3 and AQ-4 which require an analysis demonstrating that the facility would not expose sensitive receptors to substantial pollutant concentrations. The FEIR concluded that while the Mitigation Framework would reduce the potential impacts associated with exposure to air toxics, but not to a level less than significant. Should future development within the Specific Plan include a gas station or dry cleaners, Mitigation Framework AQ-3 and AQ-4 would be required. These measures would ensure completion of an analysis demonstrating that the facility would not expose sensitive receptors to substantial pollutant concentrations:

AQ-3: Prior to the issuance of building permits for any new facility that would have the potential to emit toxic air contaminants, in accordance with Assembly Bill 2588, an emissions inventory and health risk assessment shall be prepared. If adverse health impacts exceeding public notification levels (cancer risk equal to or greater than 10 in 1,000,000; see Section 5.3.5.1 [b and c]) are identified, the facility shall provide public notice to residents located within the public notification area and submit a risk reduction audit and plan to the Air Pollution Control District (APCD) that demonstrates how the facility would reduce health risks to less than significant levels within five years of the date the plan.

AQ-4: Prior to the issuance of building permits for any project containing a facility identified in Table 5.3-7 [of the FEIR], or locating air quality sensitive receptors closer than the recommended buffer distances, future projects implemented in accordance with the CPU shall be required to prepare a health risk assessment (HRA) with a Tier I analysis in accordance with APCD HRA Guidelines and the Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics "Hot Spots" Program Risk Assessment Guidelines (San Diego Air Pollution Control District [SDAPCD] 2006; OEHHA 2003).

All HRAs shall include:

1. The estimated maximum 70-year lifetime cancer risk;
2. The estimated maximum non-cancer chronic health hazard index; and
3. The estimated maximum non-cancer acute health hazard index.

Risk estimates shall each be made for the off-site point of maximum health impact (PMI), the maximally exposed individual resident (MEIR), and the maximally exposed individual worker (MEIW). The location of each of these receptors shall be specified. The lifetime cancer risk, non-cancer chronic and acute health hazard indexes for nearby sensitive receptors shall also be reported. Cancer and non-cancer chronic risk estimates shall be based on inhalation risks. HRAs shall include estimates of population exposure, including cancer burden, as well as cancer and non-cancer chronic and acute risk isopleths (contours). The HRA shall identify best available control technology required to reduce risk to less than 10 in 1,000,000.

While the Mitigation Framework would reduce the potential impacts associated with exposure to air toxics, no specific projects or improvements have been proposed as part of the Specific Plan, and it cannot be determined whether the proposed mitigation would reduce all impacts to below a level of significance. Therefore, as with the OMCP FEIR, impacts related to exposure to air toxics would be significant and unavoidable.

Project construction would result in the generation of DPM emissions from the use of off-road diesel construction equipment required for site grading and earthmoving, trenching, asphalt paving, and other construction activities. As calculated in this analysis, the excess cancer risk would be less than the screening threshold of 10 in a million, impacts to sensitive receptors from exposure to construction-related DPM would be less than significant.

The OMCP FEIR concluded that impacts associated with odors would be less than significant. The Specific Plan does not include heavy industrial or agricultural uses that are typically associated with odor complaints. The proposed sewer lift stations would include industry standard odor control systems and scrubber fans that would reduce odors in accordance with applicable regulations such as SDAPCD Rule 51. Odor impacts would be less than significant.

7.2 Project-level Analysis

Development within Planning Areas 8 through 14 represents buildout of a portion of the Specific Plan. As discussed, operational emissions associated with the Specific Plan would be less than those associated with the adopted land uses for all criteria pollutants. Thus, because the land use changes associated with the Specific Plan would not result in an effective increase in operational emissions, the Specific Plan would be consistent with assumptions contained in the RAQS. Therefore, the Specific Plan, including development within all Planning Areas, would not obstruct or conflict with implementation of the RAQS, and impacts would be less than significant.

As shown in Table 10, construction emissions associated with buildout of the project-level components described in Section 2.2 would not exceed the applicable regional emissions thresholds. Therefore, as Specific Plan construction emissions would be well below these limits, construction of project-level components would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations.

As shown in Table 13, total operational emissions associated with buildout of Planning Areas 8 through 14 would not exceed the applicable regional emissions thresholds. Therefore, as project operation emissions would be below these limits, project operation would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations. Therefore, the project would result in a less than significant impact.

Further, as with the Specific Plan, the project-level components would not expose sensitive receptors to substantial pollutant concentrations or generate odors that would affect a substantial number of people. The proposed sewer lift stations would include odor control systems and scrubber fans that would reduce odors in accordance with SDAPCD regulatory requirements. Odor impacts would be less than significant. All air quality impacts associated with the VTM and related project-level components would be less than significant.

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ATTACHMENTS

ATTACHMENT 1

CalEEMod Output – Program-Level

Southwest Village - Program-Level Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Southwest Village - Program-Level
Operational Year	2035
Lead Agency	City of San Diego
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	21.8
Location	32.55856671411962, -117.02472074384906
County	San Diego
City	San Diego
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6666
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	3,972	Dwelling Unit	163	3,813,120	1,400,000	—	11,082	—

Single Family Housing	1,158	Dwelling Unit	80.9	2,258,100	13,563,488	—	3,231	—
Regional Shopping Center	175	1000sqft	4.02	175,000	35,000	—	—	—
Elementary School	1,268	Student	7.60	106,009	66,000	66,000	—	—
City Park	17.6	Acre	17.6	0.00	766,656	766,656	—	—
General Light Industry	5.00	1000sqft	4.00	5,000	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-15	Require All-Electric Development

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	361	345	114	1,488	3.28	3.19	321	324	3.04	81.3	84.4	2,602	385,468	388,070	279	13.2	406	399,363
Mit.	359	344	98.4	1,481	3.19	1.94	321	323	1.79	81.3	83.1	2,602	365,881	368,483	277	13.1	406	379,722
% Reduced	< 0.5%	< 0.5%	14%	< 0.5%	3%	39%	—	< 0.5%	41%	—	1%	—	5%	5%	1%	< 0.5%	—	5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	331	316	121	1,119	3.13	3.04	321	324	2.93	81.3	84.2	2,602	370,226	372,828	279	13.9	55.4	383,998
Mit.	329	315	105	1,112	3.03	1.79	321	323	1.68	81.3	83.0	2,602	350,640	353,242	278	13.8	55.4	364,357

% Reduced	1%	< 0.5%	13%	1%	3%	41%	—	< 0.5%	43%	—	1%	—	5%	5%	1%	< 0.5%	—	5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	322	309	109	1,143	2.81	2.92	281	284	2.80	71.2	74.0	2,602	337,897	340,499	278	12.3	184	351,294
Mit.	321	308	93.2	1,136	2.71	1.67	281	282	1.55	71.2	72.7	2,602	318,311	320,913	276	12.3	184	331,653
% Reduced	1%	< 0.5%	14%	1%	4%	43%	—	< 0.5%	45%	—	2%	—	6%	6%	1%	< 0.5%	—	6%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	58.9	56.3	19.8	209	0.51	0.53	51.2	51.8	0.51	13.0	13.5	431	55,943	56,374	45.9	2.04	30.5	58,161
Mit.	58.5	56.1	17.0	207	0.50	0.30	51.2	51.5	0.28	13.0	13.3	431	52,700	53,131	45.7	2.03	30.5	54,909
% Reduced	1%	< 0.5%	14%	1%	4%	43%	—	< 0.5%	45%	—	2%	—	6%	6%	1%	< 0.5%	—	6%
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	137	250	550	250	—	—	100	—	—	67.0	—	—	—	—	—	—	—
Unmit.	—	Yes	No	Yes	No	—	—	Yes	—	—	Yes	—	—	—	—	—	—	—
Mit.	—	Yes	No	Yes	No	—	—	Yes	—	—	Yes	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	137	250	550	250	—	—	100	—	—	67.0	—	—	—	—	—	—	—
Unmit.	—	Yes	No	Yes	No	—	—	Yes	—	—	Yes	—	—	—	—	—	—	—
Mit.	—	Yes	No	Yes	No	—	—	Yes	—	—	Yes	—	—	—	—	—	—	—

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	183	169	94.9	1,176	3.17	1.74	321	322	1.62	81.3	82.9	—	322,527	322,527	13.3	11.9	360	326,771
Area	176	175	2.79	305	0.01	0.15	—	0.15	0.12	—	0.12	0.00	829	829	0.03	0.01	—	832
Energy	1.88	0.94	16.1	7.16	0.10	1.30	—	1.30	1.30	—	1.30	—	57,361	57,361	3.88	0.29	—	57,544
Water	—	—	—	—	—	—	—	—	—	—	—	378	4,750	5,129	39.1	0.95	—	6,389
Waste	—	—	—	—	—	—	—	—	—	—	—	2,224	0.00	2,224	222	0.00	—	7,780
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0
Total	361	345	114	1,488	3.28	3.19	321	324	3.04	81.3	84.4	2,602	385,468	388,070	279	13.2	406	399,363
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	182	168	104	1,111	3.03	1.74	321	322	1.62	81.3	82.9	—	308,115	308,115	14.1	12.6	9.34	312,239
Area	147	147	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	1.88	0.94	16.1	7.16	0.10	1.30	—	1.30	1.30	—	1.30	—	57,361	57,361	3.88	0.29	—	57,544
Water	—	—	—	—	—	—	—	—	—	—	—	378	4,750	5,129	39.1	0.95	—	6,389
Waste	—	—	—	—	—	—	—	—	—	—	—	2,224	0.00	2,224	222	0.00	—	7,780
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0
Total	331	316	121	1,119	3.13	3.04	321	324	2.93	81.3	84.2	2,602	370,226	372,828	279	13.9	55.4	383,998
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	159	147	91.1	985	2.70	1.54	281	282	1.44	71.2	72.6	—	275,377	275,377	12.3	11.1	138	279,124
Area	162	161	1.38	150	0.01	0.08	—	0.08	0.06	—	0.06	0.00	409	409	0.02	< 0.005	—	410
Energy	1.88	0.94	16.1	7.16	0.10	1.30	—	1.30	1.30	—	1.30	—	57,361	57,361	3.88	0.29	—	57,544
Water	—	—	—	—	—	—	—	—	—	—	—	378	4,750	5,129	39.1	0.95	—	6,389
Waste	—	—	—	—	—	—	—	—	—	—	—	2,224	0.00	2,224	222	0.00	—	7,780
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0
Total	322	309	109	1,143	2.81	2.92	281	284	2.80	71.2	74.0	2,602	337,897	340,499	278	12.3	184	351,294

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	29.0	26.8	16.6	180	0.49	0.28	51.2	51.5	0.26	13.0	13.3	—	45,592	45,592	2.04	1.83	22.9	46,212
Area	29.5	29.4	0.25	27.4	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	67.7	67.7	< 0.005	< 0.005	—	67.9
Energy	0.34	0.17	2.95	1.31	0.02	0.24	—	0.24	0.24	—	0.24	—	9,497	9,497	0.64	0.05	—	9,527
Water	—	—	—	—	—	—	—	—	—	—	—	62.6	786	849	6.47	0.16	—	1,058
Waste	—	—	—	—	—	—	—	—	—	—	—	368	0.00	368	36.8	0.00	—	1,288
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.62	7.62
Total	58.9	56.3	19.8	209	0.51	0.53	51.2	51.8	0.51	13.0	13.5	431	55,943	56,374	45.9	2.04	30.5	58,161

2.6. Operations Emissions by Sector, Mitigated

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

Sector	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	183	169	94.9	1,176	3.17	1.74	321	322	1.62	81.3	82.9	—	322,527	322,527	13.3	11.9	360	326,771
Area	176	175	2.79	305	0.01	0.15	—	0.15	0.12	—	0.12	0.00	829	829	0.03	0.01	—	832
Energy	0.08	0.04	0.71	0.59	< 0.005	0.05	—	0.05	0.05	—	0.05	—	37,775	37,775	2.14	0.25	—	37,903
Water	—	—	—	—	—	—	—	—	—	—	—	378	4,750	5,129	39.1	0.95	—	6,389
Waste	—	—	—	—	—	—	—	—	—	—	—	2,224	0.00	2,224	222	0.00	—	7,780
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0
Total	359	344	98.4	1,481	3.19	1.94	321	323	1.79	81.3	83.1	2,602	365,881	368,483	277	13.1	406	379,722
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	182	168	104	1,111	3.03	1.74	321	322	1.62	81.3	82.9	—	308,115	308,115	14.1	12.6	9.34	312,239
Area	147	147	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.08	0.04	0.71	0.59	< 0.005	0.05	—	0.05	0.05	—	0.05	—	37,775	37,775	2.14	0.25	—	37,903
Water	—	—	—	—	—	—	—	—	—	—	—	378	4,750	5,129	39.1	0.95	—	6,389

Waste	—	—	—	—	—	—	—	—	—	—	—	2,224	0.00	2,224	222	0.00	—	7,780
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0
Total	329	315	105	1,112	3.03	1.79	321	323	1.68	81.3	83.0	2,602	350,640	353,242	278	13.8	55.4	364,357
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	159	147	91.1	985	2.70	1.54	281	282	1.44	71.2	72.6	—	275,377	275,377	12.3	11.1	138	279,124
Area	162	161	1.38	150	0.01	0.08	—	0.08	0.06	—	0.06	0.00	409	409	0.02	< 0.005	—	410
Energy	0.08	0.04	0.71	0.59	< 0.005	0.05	—	0.05	0.05	—	0.05	—	37,775	37,775	2.14	0.25	—	37,903
Water	—	—	—	—	—	—	—	—	—	—	—	378	4,750	5,129	39.1	0.95	—	6,389
Waste	—	—	—	—	—	—	—	—	—	—	—	2,224	0.00	2,224	222	0.00	—	7,780
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0
Total	321	308	93.2	1,136	2.71	1.67	281	282	1.55	71.2	72.7	2,602	318,311	320,913	276	12.3	184	331,653
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	29.0	26.8	16.6	180	0.49	0.28	51.2	51.5	0.26	13.0	13.3	—	45,592	45,592	2.04	1.83	22.9	46,212
Area	29.5	29.4	0.25	27.4	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	67.7	67.7	< 0.005	< 0.005	—	67.9
Energy	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	6,254	6,254	0.35	0.04	—	6,275
Water	—	—	—	—	—	—	—	—	—	—	—	62.6	786	849	6.47	0.16	—	1,058
Waste	—	—	—	—	—	—	—	—	—	—	—	368	0.00	368	36.8	0.00	—	1,288
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.62	7.62
Total	58.5	56.1	17.0	207	0.50	0.30	51.2	51.5	0.28	13.0	13.3	431	52,700	53,131	45.7	2.03	30.5	54,909

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	88.4	81.3	47.9	602	1.65	0.90	168	169	0.84	42.6	43.4	—	168,466	168,466	6.68	6.05	189	170,624
Single Family Housing	35.9	33.0	19.4	244	0.67	0.37	68.2	68.6	0.34	17.3	17.6	—	68,365	68,365	2.71	2.45	76.6	69,241
Regional Shopping Center	39.7	37.5	16.9	194	0.47	0.27	46.4	46.6	0.25	11.8	12.0	—	47,534	47,534	2.47	2.06	52.1	48,261
Elementary School	11.5	10.5	6.37	80.8	0.22	0.12	22.8	22.9	0.11	5.78	5.90	—	22,826	22,826	0.89	0.81	25.6	23,114
City Park	7.71	7.08	4.28	54.3	0.15	0.08	15.3	15.4	0.08	3.88	3.96	—	15,337	15,337	0.59	0.54	17.2	15,531
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	183	169	94.9	1,176	3.17	1.74	321	322	1.62	81.3	82.9	—	322,527	322,527	13.3	11.9	360	326,771
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	87.7	80.6	52.7	565	1.58	0.90	168	169	0.84	42.6	43.4	—	160,907	160,907	7.03	6.40	4.89	162,996
Single Family Housing	35.6	32.7	21.4	229	0.64	0.37	68.2	68.6	0.34	17.3	17.6	—	65,297	65,297	2.85	2.60	1.99	66,145
Regional Shopping Center	39.4	37.1	18.6	191	0.45	0.27	46.4	46.6	0.25	11.8	12.0	—	45,464	45,464	2.67	2.19	1.35	46,185

Elementary	11.4	10.4	7.01	75.5	0.21	0.12	22.8	22.9	0.11	5.78	5.90	—	21,800	21,800	0.93	0.85	0.66	22,078
City Park	7.65	7.01	4.71	50.7	0.14	0.08	15.3	15.4	0.08	3.88	3.96	—	14,647	14,647	0.62	0.57	0.45	14,835
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	182	168	104	1,111	3.03	1.74	321	322	1.62	81.3	82.9	—	308,115	308,115	14.1	12.6	9.34	312,239
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	15.0	13.8	9.00	98.1	0.28	0.16	28.7	28.9	0.15	7.29	7.44	—	25,505	25,505	1.09	1.00	12.8	25,842
Single Family Housing	6.27	5.75	3.76	40.9	0.12	0.07	12.0	12.1	0.06	3.04	3.10	—	10,645	10,645	0.46	0.42	5.35	10,785
Regional Shopping Center	5.54	5.23	2.53	26.0	0.06	0.04	6.10	6.14	0.03	1.55	1.58	—	5,564	5,564	0.33	0.27	2.72	5,655
Elementary School	1.47	1.34	0.90	9.86	0.03	0.02	2.93	2.95	0.01	0.74	0.76	—	2,596	2,596	0.11	0.10	1.31	2,630
City Park	0.72	0.66	0.44	4.87	0.01	0.01	1.45	1.46	0.01	0.37	0.37	—	1,283	1,283	0.05	0.05	0.65	1,299
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	29.0	26.8	16.6	180	0.49	0.28	51.2	51.5	0.26	13.0	13.3	—	45,592	45,592	2.04	1.83	22.9	46,212

4.1.2. Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	88.4	81.3	47.9	602	1.65	0.90	168	169	0.84	42.6	43.4	—	168,466	168,466	6.68	6.05	189	170,624
Single Family Housing	35.9	33.0	19.4	244	0.67	0.37	68.2	68.6	0.34	17.3	17.6	—	68,365	68,365	2.71	2.45	76.6	69,241
Regional Shopping Center	39.7	37.5	16.9	194	0.47	0.27	46.4	46.6	0.25	11.8	12.0	—	47,534	47,534	2.47	2.06	52.1	48,261
Elementary School	11.5	10.5	6.37	80.8	0.22	0.12	22.8	22.9	0.11	5.78	5.90	—	22,826	22,826	0.89	0.81	25.6	23,114
City Park	7.71	7.08	4.28	54.3	0.15	0.08	15.3	15.4	0.08	3.88	3.96	—	15,337	15,337	0.59	0.54	17.2	15,531
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	183	169	94.9	1,176	3.17	1.74	321	322	1.62	81.3	82.9	—	322,527	322,527	13.3	11.9	360	326,771
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	87.7	80.6	52.7	565	1.58	0.90	168	169	0.84	42.6	43.4	—	160,907	160,907	7.03	6.40	4.89	162,996
Single Family Housing	35.6	32.7	21.4	229	0.64	0.37	68.2	68.6	0.34	17.3	17.6	—	65,297	65,297	2.85	2.60	1.99	66,145
Regional Shopping Center	39.4	37.1	18.6	191	0.45	0.27	46.4	46.6	0.25	11.8	12.0	—	45,464	45,464	2.67	2.19	1.35	46,185

Elementary	11.4	10.4	7.01	75.5	0.21	0.12	22.8	22.9	0.11	5.78	5.90	—	21,800	21,800	0.93	0.85	0.66	22,078
City Park	7.65	7.01	4.71	50.7	0.14	0.08	15.3	15.4	0.08	3.88	3.96	—	14,647	14,647	0.62	0.57	0.45	14,835
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	182	168	104	1,111	3.03	1.74	321	322	1.62	81.3	82.9	—	308,115	308,115	14.1	12.6	9.34	312,239
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	15.0	13.8	9.00	98.1	0.28	0.16	28.7	28.9	0.15	7.29	7.44	—	25,505	25,505	1.09	1.00	12.8	25,842
Single Family Housing	6.27	5.75	3.76	40.9	0.12	0.07	12.0	12.1	0.06	3.04	3.10	—	10,645	10,645	0.46	0.42	5.35	10,785
Regional Shopping Center	5.54	5.23	2.53	26.0	0.06	0.04	6.10	6.14	0.03	1.55	1.58	—	5,564	5,564	0.33	0.27	2.72	5,655
Elementary School	1.47	1.34	0.90	9.86	0.03	0.02	2.93	2.95	0.01	0.74	0.76	—	2,596	2,596	0.11	0.10	1.31	2,630
City Park	0.72	0.66	0.44	4.87	0.01	0.01	1.45	1.46	0.01	0.37	0.37	—	1,283	1,283	0.05	0.05	0.65	1,299
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	29.0	26.8	16.6	180	0.49	0.28	51.2	51.5	0.26	13.0	13.3	—	45,592	45,592	2.04	1.83	22.9	46,212

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	21,734	21,734	1.22	0.15	—	21,808
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	11,476	11,476	0.64	0.08	—	11,515
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	2,489	2,489	0.14	0.02	—	2,498
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	1,154	1,154	0.06	0.01	—	1,158
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	72.4	72.4	< 0.005	< 0.005	—	72.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	36,925	36,925	2.07	0.25	—	37,051
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	21,734	21,734	1.22	0.15	—	21,808
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	11,476	11,476	0.64	0.08	—	11,515

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	2,489	2,489	0.14	0.02	—	2,498
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	1,154	1,154	0.06	0.01	—	1,158
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	72.4	72.4	< 0.005	< 0.005	—	72.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	36,925	36,925	2.07	0.25	—	37,051
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	3,598	3,598	0.20	0.02	—	3,611
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,900	1,900	0.11	0.01	—	1,906
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	412	412	0.02	< 0.005	—	414
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	191	191	0.01	< 0.005	—	192
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	12.0	12.0	< 0.005	< 0.005	—	12.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	6,113	6,113	0.34	0.04	—	6,134

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	21,736	21,736	1.22	0.15	—	21,810
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	11,481	11,481	0.64	0.08	—	11,520
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	2,489	2,489	0.14	0.02	—	2,498
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	1,154	1,154	0.06	0.01	—	1,158
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	72.4	72.4	< 0.005	< 0.005	—	72.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	36,932	36,932	2.07	0.25	—	37,059
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	21,736	21,736	1.22	0.15	—	21,810
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	11,481	11,481	0.64	0.08	—	11,520

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	2,489	2,489	0.14	0.02	—	2,498
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	1,154	1,154	0.06	0.01	—	1,158
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	72.4	72.4	< 0.005	< 0.005	—	72.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	36,932	36,932	2.07	0.25	—	37,059
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	3,599	3,599	0.20	0.02	—	3,611
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,901	1,901	0.11	0.01	—	1,907
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	412	412	0.02	< 0.005	—	414
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	191	191	0.01	< 0.005	—	192
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	12.0	12.0	< 0.005	< 0.005	—	12.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	6,115	6,115	0.34	0.04	—	6,135

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.83	0.42	7.10	3.02	0.05	0.57	—	0.57	0.57	—	0.57	—	9,011	9,011	0.80	0.02	—	9,036
Single Family Housing	0.98	0.49	8.34	3.55	0.05	0.67	—	0.67	0.67	—	0.67	—	10,583	10,583	0.94	0.02	—	10,613
Regional Shopping Center	0.02	0.01	0.20	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	243	243	0.02	< 0.005	—	243
Elementary School	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	537
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	0.01	< 0.005	—	64.9
Total	1.88	0.94	16.1	7.16	0.10	1.30	—	1.30	1.30	—	1.30	—	20,436	20,436	1.81	0.04	—	20,493
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.83	0.42	7.10	3.02	0.05	0.57	—	0.57	0.57	—	0.57	—	9,011	9,011	0.80	0.02	—	9,036
Single Family Housing	0.98	0.49	8.34	3.55	0.05	0.67	—	0.67	0.67	—	0.67	—	10,583	10,583	0.94	0.02	—	10,613

Regional Shopping Center	0.02	0.01	0.20	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	243	243	0.02	< 0.005	—	243
Elementary School	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	537
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	0.01	< 0.005	—	64.9
Total	1.88	0.94	16.1	7.16	0.10	1.30	—	1.30	1.30	—	1.30	—	20,436	20,436	1.81	0.04	—	20,493
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.15	0.08	1.30	0.55	0.01	0.10	—	0.10	0.10	—	0.10	—	1,492	1,492	0.13	< 0.005	—	1,496
Single Family Housing	0.18	0.09	1.52	0.65	0.01	0.12	—	0.12	0.12	—	0.12	—	1,752	1,752	0.16	< 0.005	—	1,757
Regional Shopping Center	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	40.2	40.2	< 0.005	< 0.005	—	40.3
Elementary School	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.6	88.6	0.01	< 0.005	—	88.8
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.7
Total	0.34	0.17	2.95	1.31	0.02	0.24	—	0.24	0.24	—	0.24	—	3,383	3,383	0.30	0.01	—	3,393

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Regional Shopping Center	0.02	0.01	0.20	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	243	243	0.02	< 0.005	—	243
Elementary School	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	537
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	0.01	< 0.005	—	64.9
Total	0.08	0.04	0.71	0.59	< 0.005	0.05	—	0.05	0.05	—	0.05	—	842	842	0.07	< 0.005	—	845
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Regional Shopping Center	0.02	0.01	0.20	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	243	243	0.02	< 0.005	—	243
Elementary School	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	537
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	0.01	< 0.005	—	64.9
Total	0.08	0.04	0.71	0.59	< 0.005	0.05	—	0.05	0.05	—	0.05	—	842	842	0.07	< 0.005	—	845
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Regional Shopping Center	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	40.2	40.2	< 0.005	< 0.005	—	40.3
Elementary School	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.6	88.6	0.01	< 0.005	—	88.8
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.7
Total	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	139	139	0.01	< 0.005	—	140

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	137	137	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	10.8	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	28.8	27.2	2.79	305	0.01	0.15	—	0.15	0.12	—	0.12	—	829	829	0.03	0.01	—	832
Total	176	175	2.79	305	0.01	0.15	—	0.15	0.12	—	0.12	0.00	829	829	0.03	0.01	—	832
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	137	137	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	10.8	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	147	147	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consum Products	24.9	24.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.97	1.97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.59	2.45	0.25	27.4	< 0.005	0.01	—	0.01	0.01	—	0.01	—	67.7	67.7	< 0.005	< 0.005	—	67.9
Total	29.5	29.4	0.25	27.4	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	67.7	67.7	< 0.005	< 0.005	—	67.9

4.3.2. Mitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	137	137	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	10.8	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	28.8	27.2	2.79	305	0.01	0.15	—	0.15	0.12	—	0.12	—	829	829	0.03	0.01	—	832
Total	176	175	2.79	305	0.01	0.15	—	0.15	0.12	—	0.12	0.00	829	829	0.03	0.01	—	832
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consum Products	137	137	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	10.8	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	147	147	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	24.9	24.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.97	1.97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.59	2.45	0.25	27.4	< 0.005	0.01	—	0.01	0.01	—	0.01	—	67.7	67.7	< 0.005	< 0.005	—	67.9
Total	29.5	29.4	0.25	27.4	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	67.7	67.7	< 0.005	< 0.005	—	67.9

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	267	1,752	2,019	27.5	0.66	—	2,905

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	78.0	2,568	2,646	8.14	0.21	—	2,912
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	24.8	147	172	2.56	0.06	—	254
Elementary School	—	—	—	—	—	—	—	—	—	—	—	5.89	52.5	58.4	0.61	0.01	—	78.0
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	218	218	0.01	< 0.005	—	219
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.22	12.7	14.9	0.23	0.01	—	22.2
Total	—	—	—	—	—	—	—	—	—	—	—	378	4,750	5,129	39.1	0.95	—	6,389
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	267	1,752	2,019	27.5	0.66	—	2,905
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	78.0	2,568	2,646	8.14	0.21	—	2,912
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	24.8	147	172	2.56	0.06	—	254
Elementary School	—	—	—	—	—	—	—	—	—	—	—	5.89	52.5	58.4	0.61	0.01	—	78.0
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	218	218	0.01	< 0.005	—	219

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.22	12.7	14.9	0.23	0.01	—	22.2
Total	—	—	—	—	—	—	—	—	—	—	—	378	4,750	5,129	39.1	0.95	—	6,389
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	44.3	290	334	4.56	0.11	—	481
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	12.9	425	438	1.35	0.03	—	482
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	4.11	24.3	28.4	0.42	0.01	—	42.0
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.98	8.70	9.67	0.10	< 0.005	—	12.9
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	36.1	36.1	< 0.005	< 0.005	—	36.2
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.37	2.10	2.47	0.04	< 0.005	—	3.68
Total	—	—	—	—	—	—	—	—	—	—	—	62.6	786	849	6.47	0.16	—	1,058

4.4.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	267	1,752	2,019	27.5	0.66	—	2,905

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	78.0	2,568	2,646	8.14	0.21	—	2,912
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	24.8	147	172	2.56	0.06	—	254
Elementary School	—	—	—	—	—	—	—	—	—	—	—	5.89	52.5	58.4	0.61	0.01	—	78.0
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	218	218	0.01	< 0.005	—	219
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.22	12.7	14.9	0.23	0.01	—	22.2
Total	—	—	—	—	—	—	—	—	—	—	—	378	4,750	5,129	39.1	0.95	—	6,389
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	267	1,752	2,019	27.5	0.66	—	2,905
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	78.0	2,568	2,646	8.14	0.21	—	2,912
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	24.8	147	172	2.56	0.06	—	254
Elementary School	—	—	—	—	—	—	—	—	—	—	—	5.89	52.5	58.4	0.61	0.01	—	78.0
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	218	218	0.01	< 0.005	—	219

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.22	12.7	14.9	0.23	0.01	—	22.2
Total	—	—	—	—	—	—	—	—	—	—	—	378	4,750	5,129	39.1	0.95	—	6,389
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	44.3	290	334	4.56	0.11	—	481
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	12.9	425	438	1.35	0.03	—	482
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	4.11	24.3	28.4	0.42	0.01	—	42.0
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.98	8.70	9.67	0.10	< 0.005	—	12.9
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	36.1	36.1	< 0.005	< 0.005	—	36.2
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.37	2.10	2.47	0.04	< 0.005	—	3.68
Total	—	—	—	—	—	—	—	—	—	—	—	62.6	786	849	6.47	0.16	—	1,058

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,583	0.00	1,583	158	0.00	—	5,538
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	413	0.00	413	41.3	0.00	—	1,444
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	99.0	0.00	99.0	9.90	0.00	—	346
Elementary School	—	—	—	—	—	—	—	—	—	—	—	125	0.00	125	12.5	0.00	—	436
City Park	—	—	—	—	—	—	—	—	—	—	—	0.82	0.00	0.82	0.08	0.00	—	2.85
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.34	0.00	3.34	0.33	0.00	—	11.7
Total	—	—	—	—	—	—	—	—	—	—	—	2,224	0.00	2,224	222	0.00	—	7,780
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,583	0.00	1,583	158	0.00	—	5,538
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	413	0.00	413	41.3	0.00	—	1,444
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	99.0	0.00	99.0	9.90	0.00	—	346
Elementary School	—	—	—	—	—	—	—	—	—	—	—	125	0.00	125	12.5	0.00	—	436
City Park	—	—	—	—	—	—	—	—	—	—	—	0.82	0.00	0.82	0.08	0.00	—	2.85

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.34	0.00	3.34	0.33	0.00	—	11.7
Total	—	—	—	—	—	—	—	—	—	—	—	2,224	0.00	2,224	222	0.00	—	7,780
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	262	0.00	262	26.2	0.00	—	917
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	68.3	0.00	68.3	6.83	0.00	—	239
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	16.4	0.00	16.4	1.64	0.00	—	57.4
Elementary School	—	—	—	—	—	—	—	—	—	—	—	20.6	0.00	20.6	2.06	0.00	—	72.2
City Park	—	—	—	—	—	—	—	—	—	—	—	0.14	0.00	0.14	0.01	0.00	—	0.47
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.55	0.00	0.55	0.06	0.00	—	1.94
Total	—	—	—	—	—	—	—	—	—	—	—	368	0.00	368	36.8	0.00	—	1,288

4.5.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,583	0.00	1,583	158	0.00	—	5,538

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	413	0.00	413	41.3	0.00	—	1,444
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	99.0	0.00	99.0	9.90	0.00	—	346
Elementary School	—	—	—	—	—	—	—	—	—	—	—	125	0.00	125	12.5	0.00	—	436
City Park	—	—	—	—	—	—	—	—	—	—	—	0.82	0.00	0.82	0.08	0.00	—	2.85
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.34	0.00	3.34	0.33	0.00	—	11.7
Total	—	—	—	—	—	—	—	—	—	—	—	2,224	0.00	2,224	222	0.00	—	7,780
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,583	0.00	1,583	158	0.00	—	5,538
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	413	0.00	413	41.3	0.00	—	1,444
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	99.0	0.00	99.0	9.90	0.00	—	346
Elementary School	—	—	—	—	—	—	—	—	—	—	—	125	0.00	125	12.5	0.00	—	436
City Park	—	—	—	—	—	—	—	—	—	—	—	0.82	0.00	0.82	0.08	0.00	—	2.85

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.34	0.00	3.34	0.33	0.00	—	11.7
Total	—	—	—	—	—	—	—	—	—	—	—	2,224	0.00	2,224	222	0.00	—	7,780
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	262	0.00	262	26.2	0.00	—	917
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	68.3	0.00	68.3	6.83	0.00	—	239
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	16.4	0.00	16.4	1.64	0.00	—	57.4
Elementary School	—	—	—	—	—	—	—	—	—	—	—	20.6	0.00	20.6	2.06	0.00	—	72.2
City Park	—	—	—	—	—	—	—	—	—	—	—	0.14	0.00	0.14	0.01	0.00	—	0.47
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.55	0.00	0.55	0.06	0.00	—	1.94
Total	—	—	—	—	—	—	—	—	—	—	—	368	0.00	368	36.8	0.00	—	1,288

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.3	27.3
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.2	16.2
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.84	0.84
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.30	1.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.3	27.3
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.2	16.2
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.84	0.84
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.30	1.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.52	4.52
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.68	2.68
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14	0.14
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.62	7.62

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.3	27.3

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.2	16.2
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.84	0.84
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.30	1.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.3	27.3
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.2	16.2
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.84	0.84
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.30	1.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.52	4.52
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.68	2.68
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14	0.14
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.62	7.62

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

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

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

4.8.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	28,838	26,029	21,682	10,006,195	238,065	214,873	178,987	82,603,949
Single Family Housing	11,580	11,703	10,488	4,176,167	95,596	96,609	86,583	34,475,429
Regional Shopping Center	12,250	14,966	6,847	4,331,147	48,106	65,708	30,061	17,535,484
Elementary School	3,677	0.00	0.00	958,699	32,305	0.00	0.00	8,422,459
City Park	880	2,211	2,471	473,566	7,731	19,427	21,706	4,160,421
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	28,838	26,029	21,682	10,006,195	238,065	214,873	178,987	82,603,949

Single Family Housing	11,580	11,703	10,488	4,176,167	95,596	96,609	86,583	34,475,429
Regional Shopping Center	12,250	14,966	6,847	4,331,147	48,106	65,708	30,061	17,535,484
Elementary School	3,677	0.00	0.00	958,699	32,305	0.00	0.00	8,422,459
City Park	880	2,211	2,471	473,566	7,731	19,427	21,706	4,160,421
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	3972
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	1158
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	3972
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1158
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
12294220.5	4,098,074	444,014	148,005	—

5.10.3. Landscape Equipment

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

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	13,468,535	589	0.0330	0.0040	28,115,549
Single Family Housing	7,111,599	589	0.0330	0.0040	33,022,609
Regional Shopping Center	1,542,548	589	0.0330	0.0040	757,298
Elementary School	715,130	589	0.0330	0.0040	1,669,568
City Park	0.00	589	0.0330	0.0040	0.00
General Light Industry	44,867	589	0.0330	0.0040	201,821

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	13,469,894	589	0.0330	0.0040	0.00
Single Family Housing	7,114,825	589	0.0330	0.0040	0.00
Regional Shopping Center	1,542,548	589	0.0330	0.0040	757,298
Elementary School	715,130	589	0.0330	0.0040	1,669,568
City Park	0.00	589	0.0330	0.0040	0.00
General Light Industry	44,867	589	0.0330	0.0040	201,821

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	139,548,574	25,571,124
Single Family Housing	40,684,101	247,738,314
Regional Shopping Center	12,962,691	523,046
Elementary School	3,073,936	2,191,811
City Park	0.00	25,460,073
General Light Industry	1,156,250	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	139,548,574	25,571,124
Single Family Housing	40,684,101	247,738,314
Regional Shopping Center	12,962,691	523,046
Elementary School	3,073,936	2,191,811

City Park	0.00	25,460,073
General Light Industry	1,156,250	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	2,937	—
Single Family Housing	766	—
Regional Shopping Center	184	—
Elementary School	231	—
City Park	1.51	—
General Light Industry	6.20	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	2,937	—
Single Family Housing	766	—
Regional Shopping Center	184	—
Elementary School	231	—
City Park	1.51	—
General Light Industry	6.20	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	5.54	annual days of extreme heat
Extreme Precipitation	3.00	annual days with precipitation above 20 mm

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

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	40.0
AQ-PM	93.0
AQ-DPM	38.7
Drinking Water	24.5
Lead Risk Housing	24.7
Pesticides	0.00
Toxic Releases	91.5
Traffic	99.7
Effect Indicators	—

CleanUp Sites	61.4
Groundwater	72.5
Haz Waste Facilities/Generators	89.1
Impaired Water Bodies	98.4
Solid Waste	86.5
Sensitive Population	—
Asthma	37.8
Cardio-vascular	27.3
Low Birth Weights	14.4
Socioeconomic Factor Indicators	—
Education	70.2
Housing	26.7
Linguistic	70.5
Poverty	38.3
Unemployment	36.4

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	60.69549596
Employed	60.78532016
Median HI	69.70358014
Education	—
Bachelor's or higher	46.81124086
High school enrollment	100
Preschool enrollment	21.86577698
Transportation	—

Auto Access	61.56807391
Active commuting	58.06493007
Social	—
2-parent households	19.4661876
Voting	31.14333376
Neighborhood	—
Alcohol availability	66.71371744
Park access	58.3472347
Retail density	24.25253433
Supermarket access	40.29257026
Tree canopy	7.724881304
Housing	—
Homeownership	69.11330681
Housing habitability	64.00615937
Low-inc homeowner severe housing cost burden	97.12562556
Low-inc renter severe housing cost burden	65.61016297
Uncrowded housing	18.27280893
Health Outcomes	—
Insured adults	40.25407417
Arthritis	91.0
Asthma ER Admissions	65.1
High Blood Pressure	91.1
Cancer (excluding skin)	89.7
Asthma	80.2
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	92.7
Diagnosed Diabetes	47.0
Life Expectancy at Birth	8.6

Cognitively Disabled	33.5
Physically Disabled	50.9
Heart Attack ER Admissions	81.5
Mental Health Not Good	52.8
Chronic Kidney Disease	45.1
Obesity	43.5
Pedestrian Injuries	99.9
Physical Health Not Good	57.2
Stroke	88.3
Health Risk Behaviors	—
Binge Drinking	18.0
Current Smoker	70.0
No Leisure Time for Physical Activity	43.7
Climate Change Exposures	—
Wildfire Risk	87.5
SLR Inundation Area	0.0
Children	25.4
Elderly	90.0
English Speaking	39.4
Foreign-born	73.4
Outdoor Workers	55.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	66.4
Traffic Density	100.0
Traffic Access	52.4
Other Indices	—
Hardship	61.3
Other Decision Support	—

2016 Voting	35.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	57.0
Healthy Places Index Score for Project Location (b)	52.0
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	Specific Plan land use plan
Construction: Construction Phases	Construction 2024-2034, Operational 2035
Construction: Off-Road Equipment	Construction equipment doubled to shorten total duration
Construction: Trips and VMT	Fill taken from adjacent borrow site
Construction: Architectural Coatings	Architectural coatings
Operations: Vehicle Data	Trip rates obtained from traffic analysis Weekend trip rates adjusted proportionately

Operations: Hearths	No fireplaces or woodstoves

ATTACHMENT 2

CalEEMod Output – Project-Level – Planning Areas 8 through 14 and Project-Level Grading

Southwest Village - Project-Level Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Southwest Village - Project-Level
Construction Start Date	1/1/2025
Operational Year	2026
Lead Agency	City of San Diego
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	21.8
Location	32.56116318201801, -117.02485621416906
County	San Diego
City	San Diego
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6666
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	778	Dwelling Unit	109	746,880	316,899	—	2,171	—
Single Family Housing	142	Dwelling Unit	109	276,900	1,663,226	—	396	—
Other Asphalt Surfaces	32.1	Acre	32.1	0.00	0.00	—	—	—
General Light Industry	5.00	1000sqft	4.00	5,000	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-15	Require All-Electric Development

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.	6.14	36.7	26.6	61.5	0.07	0.90	6.86	7.70	0.83	1.63	2.41	—	14,339	14,339	0.62	0.64	29.9	14,574
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.22	36.7	80.4	71.9	0.16	2.73	15.6	18.4	2.51	7.95	10.5	—	17,706	17,706	1.18	0.79	0.78	17,971
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.50	22.2	26.9	40.4	0.06	0.92	4.86	5.77	0.84	1.49	2.33	—	9,643	9,643	0.48	0.43	8.10	9,791

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.82	4.05	4.90	7.37	0.01	0.17	0.89	1.05	0.15	0.27	0.43	—	1,597	1,597	0.08	0.07	1.34	1,621
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	137	250	550	250	—	—	100	—	—	67.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	137	250	550	250	—	—	100	—	—	67.0	—	—	—	—	—	—	—
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	5.59	4.83	26.1	56.0	0.06	0.90	5.82	6.72	0.83	1.39	2.22	—	13,097	13,097	0.57	0.59	28.3	13,316
2026	6.14	36.7	26.6	61.5	0.07	0.84	6.86	7.70	0.77	1.63	2.41	—	14,339	14,339	0.62	0.64	29.9	14,574
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	9.22	7.28	80.4	71.9	0.16	2.73	15.6	18.4	2.51	7.95	10.5	—	17,706	17,706	1.18	0.79	0.73	17,971
2026	5.93	36.7	27.0	57.8	0.07	0.84	6.86	7.70	0.77	1.63	2.41	—	13,960	13,960	0.64	0.65	0.78	14,171
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.50	3.80	26.9	40.4	0.06	0.92	4.86	5.77	0.84	1.49	2.33	—	9,643	9,643	0.48	0.43	7.05	9,791

2026	3.85	22.2	18.1	38.1	0.04	0.58	4.24	4.82	0.54	1.01	1.55	—	9,060	9,060	0.41	0.41	8.10	9,201
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.82	0.69	4.90	7.37	0.01	0.17	0.89	1.05	0.15	0.27	0.43	—	1,597	1,597	0.08	0.07	1.17	1,621
2026	0.70	4.05	3.31	6.95	0.01	0.11	0.77	0.88	0.10	0.18	0.28	—	1,500	1,500	0.07	0.07	1.34	1,523

2.3. Construction Emissions by Year, Mitigated

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

Year	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	5.59	4.83	26.1	56.0	0.06	0.90	5.82	6.72	0.83	1.39	2.22	—	13,097	13,097	0.57	0.59	28.3	13,316
2026	6.14	36.7	26.6	61.5	0.07	0.84	6.86	7.70	0.77	1.63	2.41	—	14,339	14,339	0.62	0.64	29.9	14,574
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	9.22	7.28	80.4	71.9	0.16	2.73	15.6	18.4	2.51	7.95	10.5	—	17,706	17,706	1.18	0.79	0.73	17,971
2026	5.93	36.7	27.0	57.8	0.07	0.84	6.86	7.70	0.77	1.63	2.41	—	13,960	13,960	0.64	0.65	0.78	14,171
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.50	3.80	26.9	40.4	0.06	0.92	4.86	5.77	0.84	1.49	2.33	—	9,643	9,643	0.48	0.43	7.05	9,791
2026	3.85	22.2	18.1	38.1	0.04	0.58	4.24	4.82	0.54	1.01	1.55	—	9,060	9,060	0.41	0.41	8.10	9,201
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.82	0.69	4.90	7.37	0.01	0.17	0.89	1.05	0.15	0.27	0.43	—	1,597	1,597	0.08	0.07	1.17	1,621
2026	0.70	4.05	3.31	6.95	0.01	0.11	0.77	0.88	0.10	0.18	0.28	—	1,500	1,500	0.07	0.07	1.34	1,523

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.	35.9	57.1	22.3	253	0.49	0.59	41.4	42.0	0.56	10.5	11.1	428	52,290	52,718	45.9	2.07	171	54,654
Mit.	35.6	56.9	19.9	252	0.48	0.40	41.4	41.8	0.37	10.5	10.9	428	49,228	49,656	45.6	2.07	171	51,584
% Reduced	1%	< 0.5%	11%	< 0.5%	3%	33%	—	< 0.5%	35%	—	2%	—	6%	6%	1%	< 0.5%	—	6%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	30.4	51.8	23.7	190	0.47	0.57	41.4	41.9	0.54	10.5	11.0	428	49,996	50,424	46.1	2.19	12.8	52,240
Mit.	30.1	51.7	21.3	189	0.46	0.37	41.4	41.8	0.35	10.5	10.8	428	46,934	47,362	45.8	2.18	12.8	49,169
% Reduced	1%	< 0.5%	10%	1%	3%	34%	—	< 0.5%	36%	—	2%	—	6%	6%	1%	< 0.5%	—	6%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	31.2	52.6	22.7	207	0.46	0.56	39.0	39.6	0.54	9.89	10.4	428	48,340	48,768	45.9	2.08	75.7	50,611
Mit.	30.9	52.4	20.3	206	0.44	0.37	39.0	39.4	0.34	9.89	10.2	428	45,278	45,706	45.6	2.07	75.7	47,541
% Reduced	1%	< 0.5%	11%	< 0.5%	3%	35%	—	< 0.5%	36%	—	2%	—	6%	6%	1%	< 0.5%	—	6%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.69	9.59	4.15	37.9	0.08	0.10	7.12	7.22	0.10	1.81	1.90	70.9	8,003	8,074	7.60	0.34	12.5	8,379
Mit.	5.64	9.57	3.71	37.7	0.08	0.07	7.12	7.19	0.06	1.81	1.87	70.9	7,496	7,567	7.56	0.34	12.5	7,871
% Reduced	1%	< 0.5%	11%	< 0.5%	3%	35%	—	< 0.5%	36%	—	2%	—	6%	6%	1%	< 0.5%	—	6%
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	137	250	550	250	—	—	100	—	—	67.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	137	250	550	250	—	—	100	—	—	67.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	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	30.7	28.3	19.3	200	0.48	0.37	41.4	41.7	0.34	10.5	10.8	—	48,531	48,531	2.30	1.87	162	49,307
Area	4.92	28.7	0.51	52.4	< 0.005	0.03	—	0.03	0.02	—	0.02	0.00	140	140	0.01	< 0.005	—	141
Energy	0.29	0.14	2.47	1.07	0.02	0.20	—	0.20	0.20	—	0.20	—	3,567	3,567	0.60	0.04	—	3,595
Water	—	—	—	—	—	—	—	—	—	—	—	64.2	51.9	116	6.62	0.16	—	329
Waste	—	—	—	—	—	—	—	—	—	—	—	364	0.00	364	36.4	0.00	—	1,274
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.63	8.63
Total	35.9	57.1	22.3	253	0.49	0.59	41.4	42.0	0.56	10.5	11.1	428	52,290	52,718	45.9	2.07	171	54,654
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	30.1	27.7	21.2	189	0.46	0.37	41.4	41.7	0.34	10.5	10.8	—	46,378	46,378	2.45	1.98	4.21	47,033
Area	0.00	24.0	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.29	0.14	2.47	1.07	0.02	0.20	—	0.20	0.20	—	0.20	—	3,567	3,567	0.60	0.04	—	3,595
Water	—	—	—	—	—	—	—	—	—	—	—	64.2	51.9	116	6.62	0.16	—	329
Waste	—	—	—	—	—	—	—	—	—	—	—	364	0.00	364	36.4	0.00	—	1,274

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.63	8.63
Total	30.4	51.8	23.7	190	0.47	0.57	41.4	41.9	0.54	10.5	11.0	428	49,996	50,424	46.1	2.19	12.8	52,240
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	28.5	26.1	20.0	181	0.44	0.35	39.0	39.4	0.33	9.89	10.2	—	44,652	44,652	2.30	1.87	67.1	45,335
Area	2.43	26.3	0.25	25.8	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	69.3	69.3	< 0.005	< 0.005	—	69.5
Energy	0.29	0.14	2.47	1.07	0.02	0.20	—	0.20	0.20	—	0.20	—	3,567	3,567	0.60	0.04	—	3,595
Water	—	—	—	—	—	—	—	—	—	—	—	64.2	51.9	116	6.62	0.16	—	329
Waste	—	—	—	—	—	—	—	—	—	—	—	364	0.00	364	36.4	0.00	—	1,274
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.63	8.63
Total	31.2	52.6	22.7	207	0.46	0.56	39.0	39.6	0.54	9.89	10.4	428	48,340	48,768	45.9	2.08	75.7	50,611
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.20	4.77	3.65	33.0	0.08	0.06	7.12	7.18	0.06	1.81	1.87	—	7,393	7,393	0.38	0.31	11.1	7,506
Area	0.44	4.80	0.05	4.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	11.5	11.5	< 0.005	< 0.005	—	11.5
Energy	0.05	0.03	0.45	0.20	< 0.005	0.04	—	0.04	0.04	—	0.04	—	590	590	0.10	0.01	—	595
Water	—	—	—	—	—	—	—	—	—	—	—	10.6	8.59	19.2	1.10	0.03	—	54.5
Waste	—	—	—	—	—	—	—	—	—	—	—	60.3	0.00	60.3	6.02	0.00	—	211
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.43	1.43
Total	5.69	9.59	4.15	37.9	0.08	0.10	7.12	7.22	0.10	1.81	1.90	70.9	8,003	8,074	7.60	0.34	12.5	8,379

2.6. Operations Emissions by Sector, Mitigated

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

Sector	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	30.7	28.3	19.3	200	0.48	0.37	41.4	41.7	0.34	10.5	10.8	—	48,531	48,531	2.30	1.87	162	49,307
Area	4.92	28.7	0.51	52.4	< 0.005	0.03	—	0.03	0.02	—	0.02	0.00	140	140	0.01	< 0.005	—	141

Energy	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	505	505	0.33	0.04	—	524
Water	—	—	—	—	—	—	—	—	—	—	—	64.2	51.9	116	6.62	0.16	—	329
Waste	—	—	—	—	—	—	—	—	—	—	—	364	0.00	364	36.4	0.00	—	1,274
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.63	8.63
Total	35.6	56.9	19.9	252	0.48	0.40	41.4	41.8	0.37	10.5	10.9	428	49,228	49,656	45.6	2.07	171	51,584
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	30.1	27.7	21.2	189	0.46	0.37	41.4	41.7	0.34	10.5	10.8	—	46,378	46,378	2.45	1.98	4.21	47,033
Area	0.00	24.0	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	505	505	0.33	0.04	—	524
Water	—	—	—	—	—	—	—	—	—	—	—	64.2	51.9	116	6.62	0.16	—	329
Waste	—	—	—	—	—	—	—	—	—	—	—	364	0.00	364	36.4	0.00	—	1,274
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.63	8.63
Total	30.1	51.7	21.3	189	0.46	0.37	41.4	41.8	0.35	10.5	10.8	428	46,934	47,362	45.8	2.18	12.8	49,169
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	28.5	26.1	20.0	181	0.44	0.35	39.0	39.4	0.33	9.89	10.2	—	44,652	44,652	2.30	1.87	67.1	45,335
Area	2.43	26.3	0.25	25.8	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	69.3	69.3	< 0.005	< 0.005	—	69.5
Energy	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	505	505	0.33	0.04	—	524
Water	—	—	—	—	—	—	—	—	—	—	—	64.2	51.9	116	6.62	0.16	—	329
Waste	—	—	—	—	—	—	—	—	—	—	—	364	0.00	364	36.4	0.00	—	1,274
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.63	8.63
Total	30.9	52.4	20.3	206	0.44	0.37	39.0	39.4	0.34	9.89	10.2	428	45,278	45,706	45.6	2.07	75.7	47,541
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.20	4.77	3.65	33.0	0.08	0.06	7.12	7.18	0.06	1.81	1.87	—	7,393	7,393	0.38	0.31	11.1	7,506
Area	0.44	4.80	0.05	4.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	11.5	11.5	< 0.005	< 0.005	—	11.5
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	83.5	83.5	0.05	0.01	—	86.8
Water	—	—	—	—	—	—	—	—	—	—	—	10.6	8.59	19.2	1.10	0.03	—	54.5

Waste	—	—	—	—	—	—	—	—	—	—	—	60.3	0.00	60.3	6.02	0.00	—	211
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.43	1.43
Total	5.64	9.57	3.71	37.7	0.08	0.07	7.12	7.19	0.06	1.81	1.87	70.9	7,496	7,567	7.56	0.34	12.5	7,871

3. Construction Emissions Details

3.1. 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	7.88	6.62	63.3	60.4	0.10	2.73	—	2.73	2.51	—	2.51	—	10,591	10,591	0.43	0.09	—	10,627
Dust From Material Movement	—	—	—	—	—	—	15.3	15.3	—	7.88	7.88	—	—	—	—	—	—	—
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	0.37	0.31	2.95	2.81	< 0.005	0.13	—	0.13	0.12	—	0.12	—	493	493	0.02	< 0.005	—	495
Dust From Material Movement	—	—	—	—	—	—	0.71	0.71	—	0.37	0.37	—	—	—	—	—	—	—

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	0.07	0.06	0.54	0.51	< 0.005	0.02	—	0.02	0.02	—	0.02	—	81.7	81.7	< 0.005	< 0.005	—	81.9
Dust From Material Movement	—	—	—	—	—	—	0.13	0.13	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.12	1.42	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	314	314	0.02	0.01	0.03	318
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	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.03	15.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	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	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.48
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

3.2. Site Preparation (2025) - Mitigated

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	7.88	6.62	63.3	60.4	0.10	2.73	—	2.73	2.51	—	2.51	—	10,591	10,591	0.43	0.09	—	10,627
Dust From Material Movement	—	—	—	—	—	—	15.3	15.3	—	7.88	7.88	—	—	—	—	—	—	—
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	0.37	0.31	2.95	2.81	< 0.005	0.13	—	0.13	0.12	—	0.12	—	493	493	0.02	< 0.005	—	495
Dust From Material Movement	—	—	—	—	—	—	0.71	0.71	—	0.37	0.37	—	—	—	—	—	—	—
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	0.07	0.06	0.54	0.51	< 0.005	0.02	—	0.02	0.02	—	0.02	—	81.7	81.7	< 0.005	< 0.005	—	81.9

Dust From Material Movement	—	—	—	—	—	—	0.13	0.13	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.12	1.42	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	314	314	0.02	0.01	0.03	318
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	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.03	15.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	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	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.48
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

3.3. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.61	6.39	59.4	56.6	0.12	2.47	—	2.47	2.27	—	2.27	—	13,198	13,198	0.54	0.11	—	13,243
Dust From Material Movement	—	—	—	—	—	—	7.37	7.37	—	2.88	2.88	—	—	—	—	—	—	—
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	0.90	0.75	6.99	6.67	0.01	0.29	—	0.29	0.27	—	0.27	—	1,555	1,555	0.06	0.01	—	1,560
Dust From Material Movement	—	—	—	—	—	—	0.87	0.87	—	0.34	0.34	—	—	—	—	—	—	—
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	0.16	0.14	1.28	1.22	< 0.005	0.05	—	0.05	0.05	—	0.05	—	257	257	0.01	< 0.005	—	258
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.06	0.06	—	—	—	—	—	—	—
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	0.17	0.16	0.14	1.62	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	358	358	0.02	0.01	0.04	363
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	1.44	0.73	20.9	13.6	0.04	0.04	0.55	0.59	0.04	0.15	0.19	—	4,150	4,150	0.63	0.67	0.12	4,365
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.6	42.6	< 0.005	< 0.005	0.07	43.2
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	0.18	0.10	2.41	1.58	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	487	487	0.07	0.08	0.24	512
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.05	7.05	< 0.005	< 0.005	0.01	7.16
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	0.03	0.02	0.44	0.29	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	80.6	80.6	0.01	0.01	0.04	84.8

3.4. Grading (2025) - Mitigated

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	7.61	6.39	59.4	56.6	0.12	2.47	—	2.47	2.27	—	2.27	—	13,198	13,198	0.54	0.11	—	13,243

Dust From Material Movement	—	—	—	—	—	—	7.37	7.37	—	2.88	2.88	—	—	—	—	—	—	—
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	0.90	0.75	6.99	6.67	0.01	0.29	—	0.29	0.27	—	0.27	—	1,555	1,555	0.06	0.01	—	1,560
Dust From Material Movement	—	—	—	—	—	—	0.87	0.87	—	0.34	0.34	—	—	—	—	—	—	—
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	0.16	0.14	1.28	1.22	< 0.005	0.05	—	0.05	0.05	—	0.05	—	257	257	0.01	< 0.005	—	258
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.06	0.06	—	—	—	—	—	—	—
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	0.17	0.16	0.14	1.62	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	358	358	0.02	0.01	0.04	363
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	1.44	0.73	20.9	13.6	0.04	0.04	0.55	0.59	0.04	0.15	0.19	—	4,150	4,150	0.63	0.67	0.12	4,365

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.6	42.6	< 0.005	< 0.005	0.07	43.2
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	0.18	0.10	2.41	1.58	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	487	487	0.07	0.08	0.24	512
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.05	7.05	< 0.005	< 0.005	0.01	7.16
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	0.03	0.02	0.44	0.29	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	80.6	80.6	0.01	0.01	0.04	84.8

3.5. 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	2.69	2.25	20.9	26.1	0.05	0.86	—	0.86	0.79	—	0.79	—	4,795	4,795	0.19	0.04	—	4,812
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	2.69	2.25	20.9	26.1	0.05	0.86	—	0.86	0.79	—	0.79	—	4,795	4,795	0.19	0.04	—	4,812
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	1.48	1.24	11.5	14.3	0.03	0.47	—	0.47	0.44	—	0.44	—	2,637	2,637	0.11	0.02	—	2,646
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	0.27	0.23	2.10	2.62	< 0.005	0.09	—	0.09	0.08	—	0.08	—	437	437	0.02	< 0.005	—	438
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	2.69	2.47	1.88	28.4	0.00	0.00	5.19	5.19	0.00	1.22	1.22	—	5,820	5,820	0.27	0.20	21.8	5,909
Vendor	0.21	0.10	3.30	1.53	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,482	2,482	0.11	0.35	6.44	2,596
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	2.65	2.43	2.09	24.9	0.00	0.00	5.19	5.19	0.00	1.22	1.22	—	5,495	5,495	0.30	0.22	0.57	5,568
Vendor	0.21	0.10	3.43	1.58	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,483	2,483	0.11	0.35	0.17	2,591
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	1.44	1.32	1.14	13.9	0.00	0.00	2.81	2.81	0.00	0.66	0.66	—	3,049	3,049	0.16	0.12	5.18	3,093
Vendor	0.12	0.05	1.87	0.86	0.01	0.02	0.34	0.36	0.02	0.10	0.11	—	1,365	1,365	0.06	0.19	1.53	1,426
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	0.26	0.24	0.21	2.53	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	505	505	0.03	0.02	0.86	512
Vendor	0.02	0.01	0.34	0.16	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	226	226	0.01	0.03	0.25	236
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

3.6. Building Construction (2025) - Mitigated

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

Location	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	2.69	2.25	20.9	26.1	0.05	0.86	—	0.86	0.79	—	0.79	—	4,795	4,795	0.19	0.04	—	4,812
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	2.69	2.25	20.9	26.1	0.05	0.86	—	0.86	0.79	—	0.79	—	4,795	4,795	0.19	0.04	—	4,812
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	1.48	1.24	11.5	14.3	0.03	0.47	—	0.47	0.44	—	0.44	—	2,637	2,637	0.11	0.02	—	2,646
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	0.27	0.23	2.10	2.62	< 0.005	0.09	—	0.09	0.08	—	0.08	—	437	437	0.02	< 0.005	—	438
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	2.69	2.47	1.88	28.4	0.00	0.00	5.19	5.19	0.00	1.22	1.22	—	5,820	5,820	0.27	0.20	21.8	5,909
Vendor	0.21	0.10	3.30	1.53	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,482	2,482	0.11	0.35	6.44	2,596
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	2.65	2.43	2.09	24.9	0.00	0.00	5.19	5.19	0.00	1.22	1.22	—	5,495	5,495	0.30	0.22	0.57	5,568
Vendor	0.21	0.10	3.43	1.58	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,483	2,483	0.11	0.35	0.17	2,591
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	1.44	1.32	1.14	13.9	0.00	0.00	2.81	2.81	0.00	0.66	0.66	—	3,049	3,049	0.16	0.12	5.18	3,093
Vendor	0.12	0.05	1.87	0.86	0.01	0.02	0.34	0.36	0.02	0.10	0.11	—	1,365	1,365	0.06	0.19	1.53	1,426
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	0.26	0.24	0.21	2.53	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	505	505	0.03	0.02	0.86	512
Vendor	0.02	0.01	0.34	0.16	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	226	226	0.01	0.03	0.25	236
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. 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	2.56	2.14	19.7	25.9	0.05	0.76	—	0.76	0.70	—	0.70	—	4,794	4,794	0.19	0.04	—	4,811
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	2.56	2.14	19.7	25.9	0.05	0.76	—	0.76	0.70	—	0.70	—	4,794	4,794	0.19	0.04	—	4,811
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	1.61	1.35	12.4	16.3	0.03	0.48	—	0.48	0.44	—	0.44	—	3,021	3,021	0.12	0.02	—	3,032
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.25	2.27	2.98	0.01	0.09	—	0.09	0.08	—	0.08	—	500	500	0.02	< 0.005	—	502
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	2.58	2.22	1.70	26.5	0.00	0.00	5.19	5.19	0.00	1.22	1.22	—	5,701	5,701	0.27	0.20	20.0	5,788
Vendor	0.19	0.08	3.14	1.48	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,436	2,436	0.09	0.35	5.94	2,549
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	2.41	2.19	1.92	23.4	0.00	0.00	5.19	5.19	0.00	1.22	1.22	—	5,384	5,384	0.28	0.22	0.52	5,456

Vendor	0.19	0.08	3.27	1.50	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,438	2,438	0.09	0.35	0.15	2,545
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	1.50	1.36	1.20	14.9	0.00	0.00	3.22	3.22	0.00	0.75	0.75	—	3,423	3,423	0.18	0.14	5.43	3,474
Vendor	0.12	0.05	2.04	0.93	0.01	0.02	0.40	0.42	0.02	0.11	0.13	—	1,535	1,535	0.06	0.22	1.62	1,604
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	0.27	0.25	0.22	2.72	0.00	0.00	0.59	0.59	0.00	0.14	0.14	—	567	567	0.03	0.02	0.90	575
Vendor	0.02	0.01	0.37	0.17	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	254	254	0.01	0.04	0.27	266
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

3.8. Building Construction (2026) - Mitigated

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	2.56	2.14	19.7	25.9	0.05	0.76	—	0.76	0.70	—	0.70	—	4,794	4,794	0.19	0.04	—	4,811
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	2.56	2.14	19.7	25.9	0.05	0.76	—	0.76	0.70	—	0.70	—	4,794	4,794	0.19	0.04	—	4,811
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	1.61	1.35	12.4	16.3	0.03	0.48	—	0.48	0.44	—	0.44	—	3,021	3,021	0.12	0.02	—	3,032
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.25	2.27	2.98	0.01	0.09	—	0.09	0.08	—	0.08	—	500	500	0.02	< 0.005	—	502
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	2.58	2.22	1.70	26.5	0.00	0.00	5.19	5.19	0.00	1.22	1.22	—	5,701	5,701	0.27	0.20	20.0	5,788
Vendor	0.19	0.08	3.14	1.48	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,436	2,436	0.09	0.35	5.94	2,549
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	2.41	2.19	1.92	23.4	0.00	0.00	5.19	5.19	0.00	1.22	1.22	—	5,384	5,384	0.28	0.22	0.52	5,456
Vendor	0.19	0.08	3.27	1.50	0.02	0.03	0.63	0.67	0.03	0.18	0.21	—	2,438	2,438	0.09	0.35	0.15	2,545
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	1.50	1.36	1.20	14.9	0.00	0.00	3.22	3.22	0.00	0.75	0.75	—	3,423	3,423	0.18	0.14	5.43	3,474
Vendor	0.12	0.05	2.04	0.93	0.01	0.02	0.40	0.42	0.02	0.11	0.13	—	1,535	1,535	0.06	0.22	1.62	1,604
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	0.27	0.25	0.22	2.72	0.00	0.00	0.59	0.59	0.00	0.14	0.14	—	567	567	0.03	0.02	0.90	575

Vendor	0.02	0.01	0.37	0.17	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	254	254	0.01	0.04	0.27	266
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. Paving (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.81	1.52	14.2	19.9	0.03	0.64	—	0.64	0.59	—	0.59	—	3,021	3,021	0.12	0.02	—	3,032
Paving	—	2.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.15	0.13	1.21	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	257	257	0.01	< 0.005	—	257
Paving	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.02	0.22	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.5	42.5	< 0.005	< 0.005	—	42.6
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.09	1.14	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	263	263	0.01	0.01	0.03	267
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	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	22.6	22.6	< 0.005	< 0.005	0.04	22.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	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	—	3.74	3.74	< 0.005	< 0.005	0.01	3.79
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

3.10. Paving (2026) - Mitigated

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	1.81	1.52	14.2	19.9	0.03	0.64	—	0.64	0.59	—	0.59	—	3,021	3,021	0.12	0.02	—	3,032
Paving	—	2.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.15	0.13	1.21	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	257	257	0.01	< 0.005	—	257
Paving	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.02	0.22	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.5	42.5	< 0.005	< 0.005	—	42.6
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.09	1.14	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	263	263	0.01	0.01	0.03	267
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	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	22.6	22.6	< 0.005	< 0.005	0.04	22.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	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	—	3.74	3.74	< 0.005	< 0.005	0.01	3.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	1.71	2.27	< 0.005	0.05	—	0.05	0.04	—	0.04	—	267	267	0.01	< 0.005	—	268
Architectural Coatings	—	31.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.29	0.24	1.71	2.27	< 0.005	0.05	—	0.05	0.04	—	0.04	—	267	267	0.01	< 0.005	—	268
Architectural Coatings	—	31.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.17	0.14	1.01	1.34	< 0.005	0.03	—	0.03	0.03	—	0.03	—	158	158	0.01	< 0.005	—	159
Architectural Coatings	—	18.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.03	0.18	0.24	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	26.2	26.2	< 0.005	< 0.005	—	26.3
Architectural Coatings	—	3.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.52	0.44	0.34	5.30	0.00	0.00	1.04	1.04	0.00	0.24	0.24	—	1,140	1,140	0.05	0.04	3.99	1,158
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	0.48	0.44	0.38	4.68	0.00	0.00	1.04	1.04	0.00	0.24	0.24	—	1,077	1,077	0.06	0.04	0.10	1,091
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	0.28	0.26	0.23	2.80	0.00	0.00	0.61	0.61	0.00	0.14	0.14	—	643	643	0.03	0.03	1.02	652
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	0.05	0.05	0.04	0.51	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	106	106	0.01	< 0.005	0.17	108
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

3.12. Architectural Coating (2026) - Mitigated

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	0.29	0.24	1.71	2.27	< 0.005	0.05	—	0.05	0.04	—	0.04	—	267	267	0.01	< 0.005	—	268
Architectural Coatings	—	31.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.29	0.24	1.71	2.27	< 0.005	0.05	—	0.05	0.04	—	0.04	—	267	267	0.01	< 0.005	—	268
Architectural Coatings	—	31.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.17	0.14	1.01	1.34	< 0.005	0.03	—	0.03	0.03	—	0.03	—	158	158	0.01	< 0.005	—	159
Architectural Coatings	—	18.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.03	0.18	0.24	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	26.2	26.2	< 0.005	< 0.005	—	26.3
Architectural Coatings	—	3.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.52	0.44	0.34	5.30	0.00	0.00	1.04	1.04	0.00	0.24	0.24	—	1,140	1,140	0.05	0.04	3.99	1,158
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	0.48	0.44	0.38	4.68	0.00	0.00	1.04	1.04	0.00	0.24	0.24	—	1,077	1,077	0.06	0.04	0.10	1,091
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	0.28	0.26	0.23	2.80	0.00	0.00	0.61	0.61	0.00	0.14	0.14	—	643	643	0.03	0.03	1.02	652
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	0.05	0.05	0.04	0.51	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	106	106	0.01	< 0.005	0.17	108
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	24.5	22.6	15.4	160	0.38	0.29	33.0	33.3	0.28	8.37	8.65	—	38,721	38,721	1.84	1.49	130	39,340
Single Family Housing	6.21	5.72	3.90	40.4	0.10	0.07	8.36	8.44	0.07	2.12	2.19	—	9,810	9,810	0.47	0.38	32.8	9,967
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	30.7	28.3	19.3	200	0.48	0.37	41.4	41.7	0.34	10.5	10.8	—	48,531	48,531	2.30	1.87	162	49,307

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	24.0	22.1	16.9	151	0.36	0.29	33.0	33.3	0.28	8.37	8.65	—	37,002	37,002	1.96	1.58	3.36	37,526
Single Family Housing	6.09	5.59	4.29	38.3	0.09	0.07	8.36	8.44	0.07	2.12	2.19	—	9,375	9,375	0.50	0.40	0.85	9,508
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	30.1	27.7	21.2	189	0.46	0.37	41.4	41.7	0.34	10.5	10.8	—	46,378	46,378	2.45	1.98	4.21	47,033
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	4.12	3.78	2.90	26.1	0.06	0.05	5.65	5.70	0.05	1.43	1.48	—	5,865	5,865	0.30	0.25	8.81	5,954
Single Family Housing	1.07	0.99	0.75	6.81	0.02	0.01	1.47	1.48	0.01	0.37	0.39	—	1,528	1,528	0.08	0.06	2.30	1,552
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	5.20	4.77	3.65	33.0	0.08	0.06	7.12	7.18	0.06	1.81	1.87	—	7,393	7,393	0.38	0.31	11.1	7,506

4.1.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	24.5	22.6	15.4	160	0.38	0.29	33.0	33.3	0.28	8.37	8.65	—	38,721	38,721	1.84	1.49	130	39,340
Single Family Housing	6.21	5.72	3.90	40.4	0.10	0.07	8.36	8.44	0.07	2.12	2.19	—	9,810	9,810	0.47	0.38	32.8	9,967
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	30.7	28.3	19.3	200	0.48	0.37	41.4	41.7	0.34	10.5	10.8	—	48,531	48,531	2.30	1.87	162	49,307
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	24.0	22.1	16.9	151	0.36	0.29	33.0	33.3	0.28	8.37	8.65	—	37,002	37,002	1.96	1.58	3.36	37,526
Single Family Housing	6.09	5.59	4.29	38.3	0.09	0.07	8.36	8.44	0.07	2.12	2.19	—	9,375	9,375	0.50	0.40	0.85	9,508
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	30.1	27.7	21.2	189	0.46	0.37	41.4	41.7	0.34	10.5	10.8	—	46,378	46,378	2.45	1.98	4.21	47,033
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	4.12	3.78	2.90	26.1	0.06	0.05	5.65	5.70	0.05	1.43	1.48	—	5,865	5,865	0.30	0.25	8.81	5,954
Single Family Housing	1.07	0.99	0.75	6.81	0.02	0.01	1.47	1.48	0.01	0.37	0.39	—	1,528	1,528	0.08	0.06	2.30	1,552
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	5.20	4.77	3.65	33.0	0.08	0.06	7.12	7.18	0.06	1.81	1.87	—	7,393	7,393	0.38	0.31	11.1	7,506

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	326	326	0.24	0.03	—	341
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	108	108	0.08	0.01	—	113
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	5.54	5.54	< 0.005	< 0.005	—	5.79

Total	—	—	—	—	—	—	—	—	—	—	—	—	439	439	0.32	0.04	—	459
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	326	326	0.24	0.03	—	341
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	108	108	0.08	0.01	—	113
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	5.54	5.54	< 0.005	< 0.005	—	5.79
Total	—	—	—	—	—	—	—	—	—	—	—	—	439	439	0.32	0.04	—	459
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	54.0	54.0	0.04	< 0.005	—	56.4
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	17.8	17.8	0.01	< 0.005	—	18.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92	< 0.005	< 0.005	—	0.96
Total	—	—	—	—	—	—	—	—	—	—	—	—	72.7	72.7	0.05	0.01	—	76.0

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	326	326	0.24	0.03	—	341
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	108	108	0.08	0.01	—	113
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	5.54	5.54	< 0.005	< 0.005	—	5.79
Total	—	—	—	—	—	—	—	—	—	—	—	—	440	440	0.32	0.04	—	459
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	326	326	0.24	0.03	—	341
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	108	108	0.08	0.01	—	113
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	5.54	5.54	< 0.005	< 0.005	—	5.79
Total	—	—	—	—	—	—	—	—	—	—	—	—	440	440	0.32	0.04	—	459
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	54.0	54.0	0.04	< 0.005	—	56.4
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	17.9	17.9	0.01	< 0.005	—	18.7
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92	< 0.005	< 0.005	—	0.96
Total	—	—	—	—	—	—	—	—	—	—	—	—	72.8	72.8	0.05	0.01	—	76.1

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	0.16	0.08	1.39	0.59	0.01	0.11	—	0.11	0.11	—	0.11	—	1,765	1,765	0.16	< 0.005	—	1,770
Single Family Housing	0.12	0.06	1.02	0.44	0.01	0.08	—	0.08	0.08	—	0.08	—	1,298	1,298	0.11	< 0.005	—	1,301
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	0.01	< 0.005	—	64.9
Total	0.29	0.14	2.47	1.07	0.02	0.20	—	0.20	0.20	—	0.20	—	3,127	3,127	0.28	0.01	—	3,136

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.16	0.08	1.39	0.59	0.01	0.11	—	0.11	0.11	—	0.11	—	1,765	1,765	0.16	< 0.005	—	1,770
Single Family Housing	0.12	0.06	1.02	0.44	0.01	0.08	—	0.08	0.08	—	0.08	—	1,298	1,298	0.11	< 0.005	—	1,301
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	0.01	< 0.005	—	64.9
Total	0.29	0.14	2.47	1.07	0.02	0.20	—	0.20	0.20	—	0.20	—	3,127	3,127	0.28	0.01	—	3,136
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	292	292	0.03	< 0.005	—	293
Single Family Housing	0.02	0.01	0.19	0.08	< 0.005	0.02	—	0.02	0.02	—	0.02	—	215	215	0.02	< 0.005	—	215
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.7
Total	0.05	0.03	0.45	0.20	< 0.005	0.04	—	0.04	0.04	—	0.04	—	518	518	0.05	< 0.005	—	519

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	0.01	< 0.005	—	64.9
Total	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	0.01	< 0.005	—	64.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	0.01	< 0.005	—	64.9
Total	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	0.01	< 0.005	—	64.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.7
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.7

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consum er Products	—	22.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	—	1.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landsca pe Equipme nt	4.92	4.66	0.51	52.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	140	140	0.01	< 0.005	—	141
Total	4.92	28.7	0.51	52.4	< 0.005	0.03	—	0.03	0.02	—	0.02	0.00	140	140	0.01	< 0.005	—	141

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	22.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	24.0	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	4.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.44	0.42	0.05	4.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.5	11.5	< 0.005	< 0.005	—	11.5
Total	0.44	4.80	0.05	4.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	11.5	11.5	< 0.005	< 0.005	—	11.5

4.3.2. Mitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer	—	22.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	4.92	4.66	0.51	52.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	140	140	0.01	< 0.005	—	141
Total	4.92	28.7	0.51	52.4	< 0.005	0.03	—	0.03	0.02	—	0.02	0.00	140	140	0.01	< 0.005	—	141
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	22.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	24.0	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	4.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.44	0.42	0.05	4.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.5	11.5	< 0.005	< 0.005	—	11.5
Total	0.44	4.80	0.05	4.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	11.5	11.5	< 0.005	< 0.005	—	11.5

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	52.4	26.8	79.2	5.39	0.13	—	253
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	9.56	24.1	33.7	1.00	0.03	—	66.2
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.22	0.97	3.19	0.23	0.01	—	10.5
Total	—	—	—	—	—	—	—	—	—	—	—	64.2	51.9	116	6.62	0.16	—	329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	52.4	26.8	79.2	5.39	0.13	—	253
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	9.56	24.1	33.7	1.00	0.03	—	66.2
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.22	0.97	3.19	0.23	0.01	—	10.5
Total	—	—	—	—	—	—	—	—	—	—	—	64.2	51.9	116	6.62	0.16	—	329
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	8.67	4.43	13.1	0.89	0.02	—	41.8
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.58	3.99	5.58	0.17	< 0.005	—	11.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.37	0.16	0.53	0.04	< 0.005	—	1.74
Total	—	—	—	—	—	—	—	—	—	—	—	10.6	8.59	19.2	1.10	0.03	—	54.5

4.4.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	52.4	26.8	79.2	5.39	0.13	—	253
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	9.56	24.1	33.7	1.00	0.03	—	66.2

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.22	0.97	3.19	0.23	0.01	—	10.5
Total	—	—	—	—	—	—	—	—	—	—	—	64.2	51.9	116	6.62	0.16	—	329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	52.4	26.8	79.2	5.39	0.13	—	253
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	9.56	24.1	33.7	1.00	0.03	—	66.2
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.22	0.97	3.19	0.23	0.01	—	10.5
Total	—	—	—	—	—	—	—	—	—	—	—	64.2	51.9	116	6.62	0.16	—	329
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	8.67	4.43	13.1	0.89	0.02	—	41.8
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.58	3.99	5.58	0.17	< 0.005	—	11.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.37	0.16	0.53	0.04	< 0.005	—	1.74

Total	—	—	—	—	—	—	—	—	—	—	—	10.6	8.59	19.2	1.10	0.03	—	54.5

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	310	0.00	310	31.0	0.00	—	1,085
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	50.6	0.00	50.6	5.06	0.00	—	177
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.34	0.00	3.34	0.33	0.00	—	11.7
Total	—	—	—	—	—	—	—	—	—	—	—	364	0.00	364	36.4	0.00	—	1,274
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	310	0.00	310	31.0	0.00	—	1,085
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	50.6	0.00	50.6	5.06	0.00	—	177

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.34	0.00	3.34	0.33	0.00	—	11.7
Total	—	—	—	—	—	—	—	—	—	—	—	364	0.00	364	36.4	0.00	—	1,274
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	51.3	0.00	51.3	5.13	0.00	—	180
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	8.38	0.00	8.38	0.84	0.00	—	29.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.55	0.00	0.55	0.06	0.00	—	1.94
Total	—	—	—	—	—	—	—	—	—	—	—	60.3	0.00	60.3	6.02	0.00	—	211

4.5.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	310	0.00	310	31.0	0.00	—	1,085

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	50.6	0.00	50.6	5.06	0.00	—	177
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.34	0.00	3.34	0.33	0.00	—	11.7
Total	—	—	—	—	—	—	—	—	—	—	—	364	0.00	364	36.4	0.00	—	1,274
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	310	0.00	310	31.0	0.00	—	1,085
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	50.6	0.00	50.6	5.06	0.00	—	177
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.34	0.00	3.34	0.33	0.00	—	11.7
Total	—	—	—	—	—	—	—	—	—	—	—	364	0.00	364	36.4	0.00	—	1,274
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	51.3	0.00	51.3	5.13	0.00	—	180
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	8.38	0.00	8.38	0.84	0.00	—	29.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.55	0.00	0.55	0.06	0.00	—	1.94
Total	—	—	—	—	—	—	—	—	—	—	—	60.3	0.00	60.3	6.02	0.00	—	211

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.35	5.35
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.98	1.98
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.30	1.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.63	8.63
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.35	5.35
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.98	1.98

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.30	1.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.63	8.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.89	0.89
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.33	0.33
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.43	1.43

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.35	5.35
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.98	1.98
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.30	1.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.63	8.63

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.35	5.35
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.98	1.98
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.30	1.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.63	8.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.89	0.89
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.33	0.33
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.43	1.43

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

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

Equipment Type	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)

Equipme 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

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

Equipme nt Type	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

Species	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
Site Preparation	Site Preparation	1/1/2025	1/23/2025	5.00	17.0	—
Grading	Grading	1/24/2025	3/25/2025	5.00	43.0	—
Building Construction	Building Construction	3/26/2025	11/18/2026	5.00	431	—
Paving	Paving	11/19/2026	12/31/2026	5.00	31.0	—
Architectural Coating	Architectural Coating	3/5/2026	12/31/2026	5.00	216	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	6.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	8.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	4.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	2.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	4.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	2.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	6.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	6.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	4.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	4.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	4.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	2.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	6.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	8.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	4.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	2.00	8.00	148	0.41

Grading	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	4.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	2.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	6.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	6.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	4.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	4.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	4.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	2.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	35.0	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	40.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	1,185	0.50	HHDT

Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	613	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	99.2	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	30.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	123	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	35.0	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	40.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT

Grading	Hauling	1,185	0.50	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	613	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	99.2	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	30.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	123	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	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	2,073,155	691,052	7,500	2,500	83,897

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	51.0	0.00	—
Grading	321,440	86,128	258	0.00	—
Paving	0.00	0.00	0.00	0.00	33.7

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Single Family Housing	1.56	0%
Other Asphalt Surfaces	32.1	100%
General Light Industry	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	589	0.03	< 0.005
2026	0.00	589	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	5,664	5,112	4,258	1,965,291	46,758	42,202	35,154	16,224,033
Single Family Housing	1,420	1,435	1,286	512,103	11,722	11,847	10,617	4,227,557
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	5,664	5,112	4,258	1,965,291	46,758	42,202	35,154	16,224,033
Single Family Housing	1,420	1,435	1,286	512,103	11,722	11,847	10,617	4,227,557
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—

Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	778
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	142
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	778
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	142
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
2073154.5	691,052	7,500	2,500	83,897

5.10.3. Landscape Equipment

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

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	2,638,097	45.1	0.0330	0.0040	5,507,023
Single Family Housing	872,061	45.1	0.0330	0.0040	4,049,405
Other Asphalt Surfaces	0.00	45.1	0.0330	0.0040	0.00
General Light Industry	44,867	45.1	0.0330	0.0040	201,821

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	2,639,455	45.1	0.0330	0.0040	0.00
Single Family Housing	875,287	45.1	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	45.1	0.0330	0.0040	0.00
General Light Industry	44,867	45.1	0.0330	0.0040	201,821

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	27,333,532	5,788,188

Single Family Housing	4,988,897	30,378,971
Other Asphalt Surfaces	0.00	0.00
General Light Industry	1,156,250	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	27,333,532	5,788,188
Single Family Housing	4,988,897	30,378,971
Other Asphalt Surfaces	0.00	0.00
General Light Industry	1,156,250	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	575	—
Single Family Housing	93.9	—
Other Asphalt Surfaces	0.00	—
General Light Industry	6.20	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	575	—
Single Family Housing	93.9	—
Other Asphalt Surfaces	0.00	—
General Light Industry	6.20	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	5.54	annual days of extreme heat

Extreme Precipitation	3.00	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	40.0
AQ-PM	93.0
AQ-DPM	38.7
Drinking Water	24.5
Lead Risk Housing	24.7
Pesticides	0.00

Toxic Releases	91.5
Traffic	99.7
Effect Indicators	—
CleanUp Sites	61.4
Groundwater	72.5
Haz Waste Facilities/Generators	89.1
Impaired Water Bodies	98.4
Solid Waste	86.5
Sensitive Population	—
Asthma	37.8
Cardio-vascular	27.3
Low Birth Weights	14.4
Socioeconomic Factor Indicators	—
Education	70.2
Housing	26.7
Linguistic	70.5
Poverty	38.3
Unemployment	36.4

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	60.69549596
Employed	60.78532016
Median HI	69.70358014
Education	—

Bachelor's or higher	46.81124086
High school enrollment	100
Preschool enrollment	21.86577698
Transportation	—
Auto Access	61.56807391
Active commuting	58.06493007
Social	—
2-parent households	19.4661876
Voting	31.14333376
Neighborhood	—
Alcohol availability	66.71371744
Park access	58.3472347
Retail density	24.25253433
Supermarket access	40.29257026
Tree canopy	7.724881304
Housing	—
Homeownership	69.11330681
Housing habitability	64.00615937
Low-inc homeowner severe housing cost burden	97.12562556
Low-inc renter severe housing cost burden	65.61016297
Uncrowded housing	18.27280893
Health Outcomes	—
Insured adults	40.25407417
Arthritis	91.0
Asthma ER Admissions	65.1
High Blood Pressure	91.1
Cancer (excluding skin)	89.7

Asthma	80.2
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	92.7
Diagnosed Diabetes	47.0
Life Expectancy at Birth	8.6
Cognitively Disabled	33.5
Physically Disabled	50.9
Heart Attack ER Admissions	81.5
Mental Health Not Good	52.8
Chronic Kidney Disease	45.1
Obesity	43.5
Pedestrian Injuries	99.9
Physical Health Not Good	57.2
Stroke	88.3
Health Risk Behaviors	—
Binge Drinking	18.0
Current Smoker	70.0
No Leisure Time for Physical Activity	43.7
Climate Change Exposures	—
Wildfire Risk	87.5
SLR Inundation Area	0.0
Children	25.4
Elderly	90.0
English Speaking	39.4
Foreign-born	73.4
Outdoor Workers	55.2
Climate Change Adaptive Capacity	—

Impervious Surface Cover	66.4
Traffic Density	100.0
Traffic Access	52.4
Other Indices	—
Hardship	61.3
Other Decision Support	—
2016 Voting	35.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	57.0
Healthy Places Index Score for Project Location (b)	52.0
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	Total on- and off-site area to be graded - 218
Construction: Construction Phases	2 years construction
Construction: Off-Road Equipment	Equipment amount doubled to shorten total construction duration
Construction: Trips and VMT	Fill taken from adjacent borrow sites
Operations: Vehicle Data	Single family - 10 trips/du Multi-family under 20 units/acre - 8 trips/du Multi-family over 20 units/acre - 6 trips/du Weekend trip rates adjusted proportionately
Operations: Hearths	No fireplaces or wood stoves

ATTACHMENT 3

RCEM Output – Project-Level – Beyer Boulevard and Caliente Avenue Roadway Construction

Road Construction Emissions Model, Version 9.0.1

Daily Emission Estimates for -> Southwest Village - Beyer Blvd and Caliente Ave

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.81	7.24	6.98	10.31	0.31	10.00	2.35	0.27	2.08	0.02	1,814.34	0.43	0.04	1,837.37
Grading/Excavation	3.63	36.70	33.11	11.41	1.41	10.00	3.34	1.26	2.08	0.09	8,425.84	2.47	0.11	8,519.04
Drainage/Utilities/Sub-Grade	3.16	31.77	28.62	11.17	1.17	10.00	3.14	1.06	2.08	0.07	6,989.61	1.56	0.09	7,055.16
Paving	1.30	17.79	11.69	0.59	0.59	0.00	0.51	0.51	0.00	0.03	2,928.84	0.74	0.05	2,963.32
Maximum (pounds/day)	3.63	36.70	33.11	11.41	1.41	10.00	3.34	1.26	2.08	0.09	8,425.84	2.47	0.11	8,519.04
Total (tons/construction project)	0.38	3.89	3.42	1.27	0.15	1.12	0.36	0.13	0.23	0.01	859.22	0.23	0.01	868.34

Notes:

Project Start Year ->	2025
Project Length (months) ->	12
Total Project Area (acres) ->	40
Maximum Area Disturbed/Day (acres) ->	1
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	320	40
Grading/Excavation	0	0	0	0	800	40
Drainage/Utilities/Sub-Grade	0	0	0	0	720	40
Paving	0	0	0	0	560	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Southwest Village - Beyer Blvd and Caliente Ave

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.01	0.10	0.09	0.14	0.00	0.13	0.03	0.00	0.03	0.00	23.95	0.01	0.00	22.00
Grading/Excavation	0.22	2.18	1.97	0.68	0.08	0.59	0.20	0.07	0.12	0.01	500.50	0.15	0.01	459.07
Drainage/Utilities/Sub-Grade	0.13	1.26	1.13	0.44	0.05	0.40	0.12	0.04	0.08	0.00	276.79	0.06	0.00	253.46
Paving	0.03	0.35	0.23	0.01	0.01	0.00	0.01	0.01	0.00	0.00	57.99	0.01	0.00	53.23
Maximum (tons/phase)	0.22	2.18	1.97	0.68	0.08	0.59	0.20	0.07	0.12	0.01	500.50	0.15	0.01	459.07
Total (tons/construction project)	0.38	3.89	3.42	1.27	0.15	1.12	0.36	0.13	0.23	0.01	859.22	0.23	0.01	787.75

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model **Version 9.0.1**
Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Southwest Village - Beyer Blvd and Caliente Ave	
Construction Start Year	2025	Enter a Year between 2014 and 2040 (inclusive)
Project Type	1	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	12.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	2.00	miles
Total Project Area	40.00	acres
Maximum Area Disturbed/Day	1.00	acre
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County. NEW LINK 8-2-2022.

https://maps.conservation.ca.gov/cgs/gmc/

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		1.20		1/1/2025
Grading/Excavation		5.40		2/7/2025
Drainage/Utilities/Sub-Grade		3.60		7/22/2025
Paving		1.80		11/9/2025
Totals (Months)	12			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions **User Input**	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.07	0.11	0.05	0.02	1,671.86	0.00	0.26	1,750.21
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions **User Input**	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.07	0.11	0.05	0.02	1,671.86	0.00	0.26	1,750.21
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions User Input	User Override of Worker Commute Default Values	Default Values	Calculated Daily Trips	Calculated Daily VMT
Miles/ one-way trip		20		
One-way trips/day		2		
No. of employees: Grubbing/Land Clearing		8	16	320.00
No. of employees: Grading/Excavation		20	40	800.00
No. of employees: Drainage/Utilities/Sub-Grade		18	36	720.00
No. of employees: Paving		14	28	560.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Grading/Excavation (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Draining/Utilities/Sub-Grade (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Paving (grams/mile)	0.01	0.77	0.06	0.05	0.02	0.00	295.33	0.00	0.01	297.01
Grubbing/Land Clearing (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Grading/Excavation (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Draining/Utilities/Sub-Grade (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Paving (grams/trip)	0.92	2.56	0.25	0.00	0.00	0.00	63.62	0.06	0.03	73.63
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.04	0.64	0.05	0.03	0.01	0.00	210.95	0.00	0.00	212.50
Tons per const. Period - Grubbing/Land Clearing	0.00	0.01	0.00	0.00	0.00	0.00	2.78	0.00	0.00	2.80
Pounds per day - Grading/Excavation	0.10	1.59	0.12	0.08	0.03	0.01	527.39	0.01	0.01	531.24
Tons per const. Period - Grading/Excavation	0.01	0.09	0.01	0.00	0.00	0.00	31.33	0.00	0.00	31.56
Pounds per day - Drainage/Utilities/Sub-Grade	0.09	1.43	0.11	0.07	0.03	0.00	474.65	0.01	0.01	478.12
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.06	0.00	0.00	0.00	0.00	18.80	0.00	0.00	18.93
Pounds per day - Paving	0.07	1.11	0.08	0.06	0.02	0.00	368.54	0.01	0.01	371.24
Tons per const. Period - Paving	0.00	0.02	0.00	0.00	0.00	0.00	7.30	0.00	0.00	7.35
Total tons per construction project	0.01	0.18	0.01	0.01	0.00	0.00	60.20	0.00	0.00	60.64

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions User Input	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
Grubbing/Land Clearing - Exhaust		1		5	5		8.00	40.00
Grading/Excavation - Exhaust		1		5	5		8.00	40.00
Drainage/Utilities/Subgrade		1		5	5		8.00	40.00
Paving		1		5	5		8.00	40.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.07	0.11	0.05	0.02	1,671.86	0.00	0.26	1,750.21
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	1.95	0.00	0.00	2.04
Pounds per day - Grading/Excavation	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Grading/Excavation	0.00	0.00	0.02	0.00	0.00	0.00	8.76	0.00	0.00	9.17
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.01	0.00	0.00	0.00	5.84	0.00	0.00	6.12
Pounds per day - Paving	0.00	0.04	0.32	0.01	0.00	0.00	147.43	0.00	0.02	154.34
Tons per const. Period - Paving	0.00	0.00	0.01	0.00	0.00	0.00	2.92	0.00	0.00	3.06
Total tons per construction project	0.00	0.00	0.04	0.00	0.00	0.00	19.47	0.00	0.00	20.38

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		1.00	10.00	0.13	2.08	0.03
Fugitive Dust - Grading/Excavation		1.00	10.00	0.59	2.08	0.12
Fugitive Dust - Drainage/Utilities/Subgrade		1.00	10.00	0.40	2.08	0.08

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles	Mitigation Option Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.37	2.10	3.96	0.15	0.14	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Excavators	0.17	3.26	1.22	0.06	0.06	0.01	500.34	0.16	0.00	505.73
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4		Model Default Tier	Signal Boards	0.23	1.20	1.44	0.06	0.06	0.00	197.25	0.02	0.00	198.26
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day		0.77	6.57	6.62	0.27	0.25	0.02	1,455.86	0.43	0.01	1,470.44
	Grubbing/Land Clearing	tons per phase		0.01	0.09	0.09	0.00	0.00	0.00	19.22	0.01	0.00	19.41

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.37	2.10	3.96	0.15	0.14	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Excavators	0.50	9.78	3.66	0.18	0.17	0.02	1,501.02	0.49	0.01	1,517.20
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Graders	0.31	1.59	3.46	0.11	0.10	0.01	640.24	0.21	0.01	647.14
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Rollers	0.27	3.69	2.89	0.15	0.13	0.01	508.12	0.16	0.00	513.60
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rubber Tired Loaders	0.23	1.47	1.86	0.06	0.06	0.01	605.62	0.20	0.01	612.16
	2		Model Default Tier	Scrapers	1.34	10.76	12.74	0.50	0.46	0.03	2,936.30	0.95	0.03	2,967.95
	4		Model Default Tier	Signal Boards	0.23	1.20	1.44	0.06	0.06	0.00	197.25	0.02	0.00	198.26
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Tractors/Loaders/Backhoes	0.26	4.46	2.67	0.11	0.10	0.01	604.11	0.20	0.01	610.61
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grading/Excavation	pounds per day	3.53	35.07	32.67	1.32	1.22	0.08	7,750.93	2.46	0.07	7,833.36
Grading/Excavation	tons per phase	0.21	2.08	1.94	0.08	0.07	0.00	460.41	0.15	0.00	465.30

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Air Compressors	0.23	2.41	1.53	0.07	0.07	0.00	375.26	0.02	0.00	376.62
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Generator Sets	0.27	3.66	2.40	0.10	0.10	0.01	623.04	0.02	0.00	625.01
	1		Model Default Tier	Graders	0.31	1.59	3.46	0.11	0.10	0.01	640.24	0.21	0.01	647.14
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pumps	0.29	3.72	2.43	0.10	0.10	0.01	623.04	0.03	0.00	625.06
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rough Terrain Forklifts	0.10	2.29	1.28	0.04	0.03	0.00	333.72	0.11	0.00	337.31
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Scrapers	1.34	10.76	12.74	0.50	0.46	0.03	2,936.30	0.95	0.03	2,967.95
	4		Model Default Tier	Signal Boards	0.23	1.20	1.44	0.06	0.06	0.00	197.25	0.02	0.00	198.26
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Tractors/Loaders/Backhoes	0.26	4.46	2.67	0.11	0.10	0.01	604.11	0.20	0.01	610.61
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Drainage/Utilities/Sub-Grade	pounds per day	3.07	30.30	28.19	1.09	1.03	0.07	6,367.43	1.55	0.05	6,422.61
Drainage/Utilities/Sub-Grade	tons per phase	0.12	1.20	1.12	0.04	0.04	0.00	252.15	0.06	0.00	254.34

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pavers	0.17	2.90	1.58	0.07	0.07	0.00	454.99	0.15	0.00	459.90
	1		Model Default Tier	Paving Equipment	0.15	2.55	1.26	0.06	0.06	0.00	394.32	0.13	0.00	398.57
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Rollers	0.41	5.54	4.33	0.22	0.20	0.01	762.19	0.25	0.01	770.40
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4		Model Default Tier	Signal Boards	0.23	1.20	1.44	0.06	0.06	0.00	197.25	0.02	0.00	198.26
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Tractors/Loaders/Backhoes	0.26	4.46	2.67	0.11	0.10	0.01	604.11	0.20	0.01	610.61
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Paving	pounds per day	1.23	16.65	11.28	0.52	0.48	0.03	2,412.86	0.74	0.02	2,437.74
	Paving	tons per phase	0.02	0.33	0.22	0.01	0.01	0.00	47.77	0.01	0.00	48.27
Total Emissions all Phases (tons per construction period) =>			0.37	3.70	3.37	0.14	0.13	0.01	779.55	0.23	0.01	787.31

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

ATTACHMENT 4

RCEM Output – Project-Level – SR-905 Ramp Widening

Road Construction Emissions Model, Version 9.0.1

Daily Emission Estimates for -> Southwest Village - SR-905 On-Ramp

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.79	9.36	7.11	2.62	0.32	2.30	0.76	0.28	0.48	0.02	2,087.63	0.58	0.04	2,114.72
Grading/Excavation	4.03	41.85	38.16	3.89	1.59	2.30	1.89	1.42	0.48	0.10	9,522.26	2.86	0.12	9,628.09
Drainage/Utilities/Sub-Grade	2.43	27.40	22.48	3.22	0.92	2.30	1.31	0.83	0.48	0.06	5,570.10	1.17	0.07	5,621.55
Paving	1.10	16.96	10.48	0.51	0.51	0.00	0.44	0.44	0.00	0.03	2,724.13	0.74	0.05	2,757.61
Maximum (pounds/day)	4.03	41.85	38.16	3.89	1.59	2.30	1.89	1.42	0.48	0.10	9,522.26	2.86	0.12	9,628.09
Total (tons/construction project)	0.18	2.01	1.73	0.20	0.07	0.13	0.09	0.06	0.03	0.00	433.85	0.12	0.01	438.52

Notes:
Project Start Year -> 2025
Project Length (months) -> 6
Total Project Area (acres) -> 0
Maximum Area Disturbed/Day (acres) -> 0
Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	200	40
Grading/Excavation	0	0	0	0	800	40
Drainage/Utilities/Sub-Grade	0	0	0	0	560	40
Paving	0	0	0	0	400	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Southwest Village - SR-905 On-Ramp

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.01	0.06	0.05	0.02	0.00	0.02	0.00	0.00	0.00	0.00	13.78	0.00	0.00	12.66
Grading/Excavation	0.12	1.24	1.13	0.12	0.05	0.07	0.06	0.04	0.01	0.00	282.81	0.08	0.00	259.42
Drainage/Utilities/Sub-Grade	0.05	0.54	0.45	0.06	0.02	0.05	0.03	0.02	0.01	0.00	110.29	0.02	0.00	100.98
Paving	0.01	0.17	0.10	0.01	0.01	0.00	0.00	0.00	0.00	0.00	26.97	0.01	0.00	24.77
Maximum (tons/phase)	0.12	1.24	1.13	0.12	0.05	0.07	0.06	0.04	0.01	0.00	282.81	0.08	0.00	259.42
Total (tons/construction project)	0.18	2.01	1.73	0.20	0.07	0.13	0.09	0.06	0.03	0.00	433.85	0.12	0.01	397.82

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model Version 9.0.1
Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Southwest Village - SR-905 On-Ramp	
Construction Start Year	2025	Enter a Year between 2014 and 2040 (inclusive)
Project Type	2	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	6.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	0.15	miles
Total Project Area	0.23	acres
Maximum Area Disturbed/Day	0.23	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County. NEW LINK 8-2-2022.

https://maps.conservation.ca.gov/cgs/gmc/

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.60		1/1/2025
Grading/Excavation		2.70		1/20/2025
Drainage/Utilities/Sub-Grade		1.80		4/13/2025
Paving		0.90		6/7/2025
Totals (Months)	6			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions **User Input**	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions **User Input**	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker			
User Input	Commute Default Values	Default Values		
Miles/ one-way trip		20	Calculated	Calculated
One-way trips/day		2	Daily Trips	Daily VMT
No. of employees: Grubbing/Land Clearing		5	10	200.00
No. of employees: Grading/Excavation		20	40	800.00
No. of employees: Drainage/Utilities/Sub-Grade		14	28	560.00
No. of employees: Paving		10	20	400.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Grading/Excavation (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Draining/Utilities/Sub-Grade (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Paving (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Grubbing/Land Clearing (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Grading/Excavation (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Draining/Utilities/Sub-Grade (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Paving (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.03	0.40	0.03	0.02	0.01	0.00	131.85	0.00	0.00	132.81
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.88
Pounds per day - Grading/Excavation	0.10	1.59	0.12	0.08	0.03	0.01	527.39	0.01	0.01	531.24
Tons per const. Period - Grading/Excavation	0.00	0.05	0.00	0.00	0.00	0.00	15.66	0.00	0.00	15.78
Pounds per day - Drainage/Utilities/Sub-Grade	0.07	1.12	0.08	0.06	0.02	0.00	369.17	0.01	0.01	371.87
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.02	0.00	0.00	0.00	0.00	7.31	0.00	0.00	7.36
Pounds per day - Paving	0.05	0.80	0.06	0.04	0.02	0.00	263.69	0.01	0.01	265.62
Tons per const. Period - Paving	0.00	0.01	0.00	0.00	0.00	0.00	2.61	0.00	0.00	2.63
Total tons per construction project	0.01	0.08	0.01	0.00	0.00	0.00	26.45	0.00	0.00	26.65

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values	Calculated	User Override of	Default Values	Calculated
User Input	Default # Water Trucks	Number of Water Trucks	Round Trips/Vehicle/Day	Round Trips/Vehicle/Day	Trips/day	Miles/Round Trip	Miles/Round Trip	Daily VMT
Grubbing/Land Clearing - Exhaust		1		5	5		8.00	40.00
Grading/Excavation - Exhaust		1		5	5		8.00	40.00
Drainage/Utilities/Subgrade		1		5	5		8.00	40.00
Paving		1		5	5		8.00	40.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.00	0.00	1.02
Pounds per day - Grading/Excavation	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Grading/Excavation	0.00	0.00	0.01	0.00	0.00	0.00	4.38	0.00	0.00	4.59
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.01	0.00	0.00	0.00	2.92	0.00	0.00	3.06
Pounds per day - Paving	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	1.46	0.00	0.00	1.53
Total tons per construction project	0.00	0.00	0.02	0.00	0.00	0.00	9.74	0.00	0.00	10.19

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.23	2.30	0.02	0.48	0.00
Fugitive Dust - Grading/Excavation		0.23	2.30	0.07	0.48	0.01
Fugitive Dust - Drainage/Utilities/Subgrade		0.23	2.30	0.05	0.48	0.01

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.37	2.10	3.96	0.15	0.14	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Excavators	0.33	6.52	2.44	0.12	0.11	0.01	1,000.68	0.32	0.01	1,011.46
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing	pounds per day	0.77	8.92	6.76	0.29	0.27	0.02	1,808.26	0.57	0.02	1,827.48
Grubbing/Land Clearing	tons per phase	0.01	0.06	0.04	0.00	0.00	0.00	11.93	0.00	0.00	12.06

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.37	2.10	3.96	0.15	0.14	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Excavators	0.50	9.78	3.66	0.18	0.17	0.02	1,501.02	0.49	0.01	1,517.20
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Graders	0.62	3.19	6.91	0.22	0.20	0.01	1,280.48	0.41	0.01	1,294.28
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Rollers	0.27	3.69	2.89	0.15	0.13	0.01	508.12	0.16	0.00	513.60
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rubber Tired Loaders	0.23	1.47	1.86	0.06	0.06	0.01	605.62	0.20	0.01	612.16
	2		Model Default Tier	Scrapers	1.34	10.76	12.74	0.50	0.46	0.03	2,936.30	0.95	0.03	2,967.95
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4		Model Default Tier	Tractors/Loaders/Backhoes	0.53	8.92	5.34	0.22	0.20	0.01	1,208.22	0.39	0.01	1,221.22
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grading/Excavation	pounds per day	3.93	40.22	37.72	1.50	1.38	0.09	8,847.35	2.85	0.08	8,942.41
Grading/Excavation	tons per phase	0.12	1.19	1.12	0.04	0.04	0.00	262.77	0.08	0.00	265.59

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Air Compressors	0.23	2.41	1.53	0.07	0.07	0.00	375.26	0.02	0.00	376.62
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Generator Sets	0.27	3.66	2.40	0.10	0.10	0.01	623.04	0.02	0.00	625.01
	1		Model Default Tier	Graders	0.31	1.59	3.46	0.11	0.10	0.01	640.24	0.21	0.01	647.14
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pumps	0.29	3.72	2.43	0.10	0.10	0.01	623.04	0.03	0.00	625.06
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rough Terrain Forklifts	0.10	2.29	1.28	0.04	0.03	0.00	333.72	0.11	0.00	337.31
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Scrapers	0.67	5.38	6.37	0.25	0.23	0.02	1,468.15	0.47	0.01	1,483.97
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Tractors/Loaders/Backhoes	0.40	6.69	4.01	0.16	0.15	0.01	906.17	0.29	0.01	915.91
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Drainage/Utilities/Sub-Grade	pounds per day	2.35	26.25	22.08	0.85	0.80	0.05	5,053.40	1.16	0.04	5,095.24
Drainage/Utilities/Sub-Grade	tons per phase	0.05	0.52	0.44	0.02	0.02	0.00	100.06	0.02	0.00	100.89

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pavers	0.17	2.90	1.58	0.07	0.07	0.00	454.99	0.15	0.00	459.90
	1		Model Default Tier	Paving Equipment	0.15	2.55	1.26	0.06	0.06	0.00	394.32	0.13	0.00	398.57
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Rollers	0.27	3.69	2.89	0.15	0.13	0.01	508.12	0.16	0.00	513.60
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Tractors/Loaders/Backhoes	0.40	6.69	4.01	0.16	0.15	0.01	906.17	0.29	0.01	915.91
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Paving	pounds per day	1.05	16.13	10.10	0.46	0.42	0.02	2,312.92	0.74	0.02	2,337.55
	Paving	tons per phase	0.01	0.16	0.10	0.00	0.00	0.00	22.90	0.01	0.00	23.14
Total Emissions all Phases (tons per construction period) =>			0.18	1.93	1.70	0.07	0.06	0.00	397.66	0.12	0.00	401.68

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

ATTACHMENT 5

RCEM Output – Project-Level – Sewer and Water Pipelines

Road Construction Emissions Model, Version 9.0.1

Daily Emission Estimates for -> Southwest Village - Sewer and Water Pipelines

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.00	10.77	9.70	10.43	0.43	10.00	2.43	0.35	2.08	0.03	3,115.54	0.59	0.17	3,180.46
Grading/Excavation	4.23	43.07	39.26	11.65	1.65	10.00	3.54	1.46	2.08	0.10	9,775.67	2.88	0.12	9,883.03
Drainage/Utilities/Sub-Grade	2.62	28.62	23.58	10.97	0.97	10.00	2.96	0.88	2.08	0.06	5,823.51	1.19	0.08	5,876.49
Paving	1.29	18.18	11.58	0.57	0.57	0.00	0.49	0.49	0.00	0.03	2,976.84	0.76	0.05	3,011.82
Maximum (pounds/day)	4.23	43.07	39.26	11.65	1.65	10.00	3.54	1.46	2.08	0.10	9,775.67	2.88	0.17	9,883.03
Total (tons/construction project)	0.39	4.19	3.62	1.28	0.15	1.12	0.37	0.14	0.23	0.01	911.35	0.24	0.01	921.38

Notes:
Project Start Year -> 2025
Project Length (months) -> 12
Total Project Area (acres) -> 5
Maximum Area Disturbed/Day (acres) -> 1
Water Truck Used? -> Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	128	0	210	360	40
Grading/Excavation	0	0	0	0	960	40
Drainage/Utilities/Sub-Grade	0	0	0	0	720	40
Paving	0	0	0	0	560	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Southwest Village - Sewer and Water Pipelines

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.01	0.14	0.13	0.14	0.01	0.13	0.03	0.00	0.03	0.00	41.13	0.01	0.00	38.09
Grading/Excavation	0.25	2.56	2.33	0.69	0.10	0.59	0.21	0.09	0.12	0.01	580.67	0.17	0.01	532.57
Drainage/Utilities/Sub-Grade	0.10	1.13	0.93	0.43	0.04	0.40	0.12	0.03	0.08	0.00	230.61	0.05	0.00	211.11
Paving	0.03	0.36	0.23	0.01	0.01	0.00	0.01	0.01	0.00	0.00	58.94	0.02	0.00	54.10
Maximum (tons/phase)	0.25	2.56	2.33	0.69	0.10	0.59	0.21	0.09	0.12	0.01	580.67	0.17	0.01	532.57
Total (tons/construction project)	0.39	4.19	3.62	1.28	0.15	1.12	0.37	0.14	0.23	0.01	911.35	0.24	0.01	835.87

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model Version 9.0.1
Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Southwest Village - Sewer and Water Pipelines	
Construction Start Year	2025	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	12.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	1.92	miles
Total Project Area	4.67	acres
Maximum Area Disturbed/Day	1.00	acre
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County. NEW LINK 8-2-2022.

https://maps.conservation.ca.gov/cgs/gmc/

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing	20.00		128.00
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		1.20		1/1/2025
Grading/Excavation		5.40		2/7/2025
Drainage/Utilities/Sub-Grade		3.60		7/22/2025
Paving		1.80		11/9/2025
Totals (Months)	12			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions **User Input**	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				0	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.07	0.11	0.05	0.02	1,671.86	0.00	0.26	1,750.21
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions **User Input**	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing	30.00			7	210.00
Miles/round trip: Grading/Excavation	30.00			0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade	30.00			0	0.00
Miles/round trip: Paving	30.00			0	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.07	0.11	0.05	0.02	1,671.86	0.00	0.26	1,750.21
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.01	0.19	1.49	0.05	0.02	0.01	774.50	0.00	0.12	810.79
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.02	0.00	0.00	0.00	10.22	0.00	0.00	10.70
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.02	0.00	0.00	0.00	10.22	0.00	0.00	10.70

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions User Input	User Override of Worker Commute Default Values	Default Values	Calculated Daily Trips	Calculated Daily VMT
Miles/ one-way trip	20			
One-way trips/day	2			
No. of employees: Grubbing/Land Clearing	9		18	360.00
No. of employees: Grading/Excavation	24		48	960.00
No. of employees: Drainage/Utilities/Sub-Grade	18		36	720.00
No. of employees: Paving	14		28	560.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Grading/Excavation (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Draining/Utilities/Sub-Grade (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Paving (grams/mile)	0.01	0.77	0.06	0.05	0.02	0.00	295.33	0.00	0.01	297.01
Grubbing/Land Clearing (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Grading/Excavation (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Draining/Utilities/Sub-Grade (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Paving (grams/trip)	0.92	2.56	0.25	0.00	0.00	0.00	63.62	0.06	0.03	73.63
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.05	0.72	0.05	0.04	0.02	0.00	237.32	0.00	0.01	239.06
Tons per const. Period - Grubbing/Land Clearing	0.00	0.01	0.00	0.00	0.00	0.00	3.13	0.00	0.00	3.16
Pounds per day - Grading/Excavation	0.12	1.91	0.14	0.10	0.04	0.00	632.86	0.01	0.01	637.49
Tons per const. Period - Grading/Excavation	0.01	0.11	0.01	0.01	0.00	0.00	37.59	0.00	0.00	37.87
Pounds per day - Drainage/Utilities/Sub-Grade	0.09	1.43	0.11	0.07	0.03	0.00	474.65	0.01	0.01	478.12
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.06	0.00	0.00	0.00	0.00	18.80	0.00	0.00	18.93
Pounds per day - Paving	0.07	1.11	0.08	0.06	0.02	0.00	368.54	0.01	0.01	371.24
Tons per const. Period - Paving	0.00	0.02	0.00	0.00	0.00	0.00	7.30	0.00	0.00	7.35
Total tons per construction project	0.01	0.20	0.02	0.01	0.00	0.00	66.82	0.00	0.00	67.31

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions User Input	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
Grubbing/Land Clearing - Exhaust	1		5.00			8.00		40.00
Grading/Excavation - Exhaust	1		5.00			8.00		40.00
Drainage/Utilities/Subgrade	1		5.00			8.00		40.00
Paving	1		5.00			8.00		40.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.07	0.11	0.05	0.02	1,671.86	0.00	0.26	1,750.21
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	1.95	0.00	0.00	2.04
Pounds per day - Grading/Excavation	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Grading/Excavation	0.00	0.00	0.02	0.00	0.00	0.00	8.76	0.00	0.00	9.17
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.01	0.00	0.00	0.00	5.84	0.00	0.00	6.12
Pounds per day - Paving	0.00	0.04	0.32	0.01	0.00	0.00	147.43	0.00	0.02	154.34
Tons per const. Period - Paving	0.00	0.00	0.01	0.00	0.00	0.00	2.92	0.00	0.00	3.06
Total tons per construction project	0.00	0.00	0.04	0.00	0.00	0.00	19.47	0.00	0.00	20.38

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing	1.00		10.00	0.13	2.08	0.03
Fugitive Dust - Grading/Excavation	1.00		10.00	0.59	2.08	0.12
Fugitive Dust - Drainage/Utilities/Subgrade	1.00		10.00	0.40	2.08	0.08

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Crawler Tractors	0.37	2.10	3.96	0.15	0.14	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Excavators	0.33	6.52	2.44	0.12	0.11	0.01	1,000.68	0.32	0.01	1,011.46
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.00			Model Default Tier	Signal Boards	0.23	1.20	1.44	0.06	0.06	0.00	197.25	0.02	0.00	198.26
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing	pounds per day	0.94	9.83	7.84	0.33	0.31	0.02	1,956.20	0.59	0.02	1,976.17
Grubbing/Land Clearing	tons per phase	0.01	0.13	0.10	0.00	0.00	0.00	25.82	0.01	0.00	26.09

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Crawler Tractors	0.37	2.10	3.96	0.15	0.14	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.00			Model Default Tier	Excavators	0.50	9.78	3.66	0.18	0.17	0.02	1,501.02	0.49	0.01	1,517.20
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Graders	0.62	3.19	6.91	0.22	0.20	0.01	1,280.48	0.41	0.01	1,294.28
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Rollers	0.27	3.69	2.89	0.15	0.13	0.01	508.12	0.16	0.00	513.60
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rubber Tired Loaders	0.23	1.47	1.86	0.06	0.06	0.01	605.62	0.20	0.01	612.16
2.00			Model Default Tier	Scrapers	1.34	10.76	12.74	0.50	0.46	0.03	2,936.30	0.95	0.03	2,967.95
4.00			Model Default Tier	Signal Boards	0.23	1.20	1.44	0.06	0.06	0.00	197.25	0.02	0.00	198.26
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.00			Model Default Tier	Tractors/Loaders/Backhoes	0.53	8.92	5.34	0.22	0.20	0.01	1,208.22	0.39	0.01	1,221.22
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grading/Excavation	pounds per day	4.10	41.12	38.80	1.54	1.42	0.09	8,995.29	2.87	0.08	9,091.10
Grading/Excavation	tons per phase	0.24	2.44	2.30	0.09	0.08	0.01	534.32	0.17	0.00	540.01

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Air Compressors	0.23	2.41	1.53	0.07	0.07	0.00	375.26	0.02	0.00	376.62
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Generator Sets	0.27	3.66	2.40	0.10	0.10	0.01	623.04	0.02	0.00	625.01
1.00			Model Default Tier	Graders	0.31	1.59	3.46	0.11	0.10	0.01	640.24	0.21	0.01	647.14
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Pumps	0.29	3.72	2.43	0.10	0.10	0.01	623.04	0.03	0.00	625.06
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rough Terrain Forklifts	0.10	2.29	1.28	0.04	0.03	0.00	333.72	0.11	0.00	337.31
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Scrapers	0.67	5.38	6.37	0.25	0.23	0.02	1,468.15	0.47	0.01	1,483.97
4.00			Model Default Tier	Signal Boards	0.23	1.20	1.44	0.06	0.06	0.00	197.25	0.02	0.00	198.26
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.00			Model Default Tier	Tractors/Loaders/Backhoes	0.40	6.69	4.01	0.16	0.15	0.01	906.17	0.29	0.01	915.91
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment

If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Drainage/Utilities/Sub-Grade	pounds per day	2.53	27.15	23.16	0.89	0.85	0.05	5,201.34	1.18	0.04	5,243.94
Drainage/Utilities/Sub-Grade	tons per phase	0.10	1.08	0.92	0.04	0.03	0.00	205.97	0.05	0.00	207.66

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Pavers	0.17	2.90	1.58	0.07	0.07	0.00	454.99	0.15	0.00	459.90
1.00			Model Default Tier	Paving Equipment	0.15	2.55	1.26	0.06	0.06	0.00	394.32	0.13	0.00	398.57
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Rollers	0.27	3.69	2.89	0.15	0.13	0.01	508.12	0.16	0.00	513.60
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.00			Model Default Tier	Signal Boards	0.23	1.20	1.44	0.06	0.06	0.00	197.25	0.02	0.00	198.26
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.00			Model Default Tier	Tractors/Loaders/Backhoes	0.40	6.69	4.01	0.16	0.15	0.01	906.17	0.29	0.01	915.91
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Paving	pounds per day	1.22	17.03	11.18	0.50	0.46	0.03	2,460.86	0.75	0.02	2,486.24
Paving	tons per phase	0.02	0.34	0.22	0.01	0.01	0.00	48.72	0.01	0.00	49.23
Total Emissions all Phases (tons per construction period) =>		0.38	3.98	3.55	0.14	0.13	0.01	814.84	0.24	0.01	822.98

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

ATTACHMENT 6

RCEM Output – Project-Level – EVA Road

Road Construction Emissions Model, Version 9.0.1

Daily Emission Estimates for -> Southwest Village - EVA Road

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.62	6.02	5.88	10.25	0.25	10.00	2.30	0.22	2.08	0.02	1,560.92	0.41	0.04	1,582.43
Grading/Excavation	3.45	35.69	33.08	11.39	1.39	10.00	3.31	1.23	2.08	0.09	8,752.01	2.46	0.19	8,869.79
Drainage/Utilities/Sub-Grade	2.97	30.55	27.52	11.11	1.11	10.00	3.09	1.01	2.08	0.07	6,736.19	1.54	0.09	6,800.22
Paving	1.11	16.58	10.59	0.53	0.53	0.00	0.46	0.46	0.00	0.03	2,676.14	0.73	0.05	2,709.10
Maximum (pounds/day)	3.45	35.69	33.08	11.39	1.39	10.00	3.31	1.23	2.08	0.09	8,752.01	2.46	0.19	8,869.79
Total (tons/construction project)	0.18	1.87	1.67	0.63	0.07	0.56	0.18	0.06	0.12	0.00	430.11	0.11	0.01	435.34

Notes:
Project Start Year -> 2025
Project Length (months) -> 6
Total Project Area (acres) -> 3
Maximum Area Disturbed/Day (acres) -> 1
Water Truck Used? -> Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	160	40
Grading/Excavation	100	0	150	0	680	40
Drainage/Utilities/Sub-Grade	0	0	0	0	560	40
Paving	0	0	0	0	400	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Southwest Village - EVA Road

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.04	0.04	0.07	0.00	0.07	0.02	0.00	0.01	0.00	10.30	0.00	0.00	9.47
Grading/Excavation	0.10	1.06	0.98	0.34	0.04	0.30	0.10	0.04	0.06	0.00	259.93	0.07	0.01	238.98
Drainage/Utilities/Sub-Grade	0.06	0.60	0.54	0.22	0.02	0.20	0.06	0.02	0.04	0.00	133.38	0.03	0.00	122.15
Paving	0.01	0.16	0.10	0.01	0.01	0.00	0.00	0.00	0.00	0.00	26.49	0.01	0.00	24.33
Maximum (tons/phase)	0.10	1.06	0.98	0.34	0.04	0.30	0.10	0.04	0.06	0.00	259.93	0.07	0.01	238.98
Total (tons/construction project)	0.18	1.87	1.67	0.63	0.07	0.56	0.18	0.06	0.12	0.00	430.11	0.11	0.01	394.94

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model Version 9.0.1
Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Southwest Village - EVA Road	
Construction Start Year	2025	Enter a Year between 2014 and 2040 (inclusive)
Project Type	1	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	6.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	0.50	miles
Total Project Area	3.20	acres
Maximum Area Disturbed/Day	1.00	acre
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County. NEW LINK 8-2-2022.

https://maps.conservation.ca.gov/cgs/gmc/

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation	20.00	100.00	
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.60		1/1/2025
Grading/Excavation		2.70		1/20/2025
Drainage/Utilities/Sub-Grade		1.80		4/13/2025
Paving		0.90		6/7/2025
Totals (Months)		6		

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions / **User Input**	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		5	150.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.01	0.14	1.06	0.04	0.02	0.01	553.21	0.00	0.09	579.14
Tons per const. Period - Grading/Excavation	0.00	0.00	0.03	0.00	0.00	0.00	16.43	0.00	0.00	17.20
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.03	0.00	0.00	0.00	16.43	0.00	0.00	17.20

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions / **User Input**	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions User Input	User Override of Worker Commute Default Values	Default Values	Calculated Daily Trips	Calculated Daily VMT
Miles/ one-way trip		20		
One-way trips/day		2		
No. of employees: Grubbing/Land Clearing		4	8	160.00
No. of employees: Grading/Excavation		17	34	680.00
No. of employees: Drainage/Utilities/Sub-Grade		14	28	560.00
No. of employees: Paving		10	20	400.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Grading/Excavation (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Draining/Utilities/Sub-Grade (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Paving (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Grubbing/Land Clearing (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Grading/Excavation (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Draining/Utilities/Sub-Grade (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Paving (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.02	0.32	0.02	0.02	0.01	0.00	105.48	0.00	0.00	106.25
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.70
Pounds per day - Grading/Excavation	0.09	1.35	0.10	0.07	0.03	0.00	448.28	0.01	0.01	451.56
Tons per const. Period - Grading/Excavation	0.00	0.04	0.00	0.00	0.00	0.00	13.31	0.00	0.00	13.41
Pounds per day - Drainage/Utilities/Sub-Grade	0.07	1.12	0.08	0.06	0.02	0.00	369.17	0.01	0.01	371.87
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.02	0.00	0.00	0.00	0.00	7.31	0.00	0.00	7.36
Pounds per day - Paving	0.05	0.80	0.06	0.04	0.02	0.00	263.69	0.01	0.01	265.62
Tons per const. Period - Paving	0.00	0.01	0.00	0.00	0.00	0.00	2.61	0.00	0.00	2.63
Total tons per construction project	0.00	0.07	0.01	0.00	0.00	0.00	23.93	0.00	0.00	24.11

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions User Input	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
Grubbing/Land Clearing - Exhaust		1		5	5		8.00	40.00
Grading/Excavation - Exhaust		1		5	5		8.00	40.00
Drainage/Utilities/Subgrade		1		5	5		8.00	40.00
Paving		1		5	5		8.00	40.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.00	0.00	1.02
Pounds per day - Grading/Excavation	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Grading/Excavation	0.00	0.00	0.01	0.00	0.00	0.00	4.38	0.00	0.00	4.59
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.01	0.00	0.00	0.00	2.92	0.00	0.00	3.06
Pounds per day - Paving	0.00	0.04	0.32	0.01	0.00	0.00	147.52	0.00	0.02	154.44
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	1.46	0.00	0.00	1.53
Total tons per construction project	0.00	0.00	0.02	0.00	0.00	0.00	9.74	0.00	0.00	10.19

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		1.00	10.00	0.07	2.08	0.01
Fugitive Dust - Grading/Excavation		1.00	10.00	0.30	2.08	0.06
Fugitive Dust - Drainage/Utilities/Subgrade		1.00	10.00	0.20	2.08	0.04

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.37	2.10	3.96	0.15	0.14	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Excavators	0.17	3.26	1.22	0.06	0.06	0.01	500.34	0.16	0.00	505.73
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles		Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing		pounds per day		0.60	5.66	5.54	0.23	0.21	0.01	1,307.92	0.41	0.01	1,321.74
	Grubbing/Land Clearing		tons per phase		0.00	0.04	0.04	0.00	0.00	0.00	8.63	0.00	0.00	8.72

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.37	2.10	3.96	0.15	0.14	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Excavators	0.50	9.78	3.66	0.18	0.17	0.02	1,501.02	0.49	0.01	1,517.20
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Graders	0.31	1.59	3.46	0.11	0.10	0.01	640.24	0.21	0.01	647.14
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Rollers	0.27	3.69	2.89	0.15	0.13	0.01	508.12	0.16	0.00	513.60
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rubber Tired Loaders	0.23	1.47	1.86	0.06	0.06	0.01	605.62	0.20	0.01	612.16
	2		Model Default Tier	Scrapers	1.34	10.76	12.74	0.50	0.46	0.03	2,936.30	0.95	0.03	2,967.95
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Tractors/Loaders/Backhoes	0.26	4.46	2.67	0.11	0.10	0.01	604.11	0.20	0.01	610.61
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grading/Excavation	pounds per day	3.35	34.16	31.60	1.28	1.18	0.08	7,602.99	2.45	0.07	7,684.66
Grading/Excavation	tons per phase	0.10	1.01	0.94	0.04	0.03	0.00	225.81	0.07	0.00	228.23

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Air Compressors	0.23	2.41	1.53	0.07	0.07	0.00	375.26	0.02	0.00	376.62
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Generator Sets	0.27	3.66	2.40	0.10	0.10	0.01	623.04	0.02	0.00	625.01
	1		Model Default Tier	Graders	0.31	1.59	3.46	0.11	0.10	0.01	640.24	0.21	0.01	647.14
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pumps	0.29	3.72	2.43	0.10	0.10	0.01	623.04	0.03	0.00	625.06
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rough Terrain Forklifts	0.10	2.29	1.28	0.04	0.03	0.00	333.72	0.11	0.00	337.31
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Scrapers	1.34	10.76	12.74	0.50	0.46	0.03	2,936.30	0.95	0.03	2,967.95
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Tractors/Loaders/Backhoes	0.26	4.46	2.67	0.11	0.10	0.01	604.11	0.20	0.01	610.61
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Drainage/Utilities/Sub-Grade	pounds per day	2.89	29.40	27.11	1.05	0.99	0.07	6,219.49	1.54	0.05	6,273.91
Drainage/Utilities/Sub-Grade	tons per phase	0.06	0.58	0.54	0.02	0.02	0.00	123.15	0.03	0.00	124.22

Paving	Default Number of Vehicles	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*		Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pavers	0.17	2.90	1.58	0.07	0.07	0.00	454.99	0.15	0.00	459.90
	1		Model Default Tier	Paving Equipment	0.15	2.55	1.26	0.06	0.06	0.00	394.32	0.13	0.00	398.57
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Rollers	0.41	5.54	4.33	0.22	0.20	0.01	762.19	0.25	0.01	770.40
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Tractors/Loaders/Backhoes	0.26	4.46	2.67	0.11	0.10	0.01	604.11	0.20	0.01	610.61
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Paving	pounds per day	1.05	15.74	10.21	0.48	0.44	0.02	2,264.92	0.72	0.02	2,289.04
	Paving	tons per phase	0.01	0.16	0.10	0.00	0.00	0.00	22.42	0.01	0.00	22.66
Total Emissions all Phases (tons per construction period) =>			0.17	1.79	1.61	0.06	0.06	0.00	380.01	0.11	0.00	383.84

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

ATTACHMENT 7

CalEEMod Output – Adopted Otay Mesa Community Plan Update Land Uses

Southwest Village - Adopted Land Uses Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Southwest Village - Adopted Land Uses
Operational Year	2035
Lead Agency	City of San Diego
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	21.8
Location	32.56074607798034, -117.02124929523373
County	San Diego
City	San Diego
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6666
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	4,480	Dwelling Unit	167	4,300,800	1,450,000	—	12,499	—

Single Family Housing	1,400	Dwelling Unit	69.0	2,730,000	16,398,000	—	3,906	—
Regional Shopping Center	191	1000sqft	4.38	190,800	38,000	—	—	—
Elementary School	1,268	Student	21.0	106,009	180,000	180,000	—	—
City Park	40.0	Acre	40.0	0.00	1,742,400	1,742,400	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-15	Require All-Electric Development

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	417	398	132	1,723	3.82	3.71	373	377	3.53	94.7	98.2	2,948	448,118	451,066	316	15.3	471	463,984
Mit.	415	397	114	1,715	3.71	2.24	373	376	2.07	94.7	96.7	2,948	425,167	428,115	314	15.2	471	440,970
% Reduced	1%	< 0.5%	14%	< 0.5%	3%	39%	—	< 0.5%	41%	—	1%	—	5%	5%	1%	< 0.5%	—	5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	383	366	140	1,299	3.64	3.53	373	377	3.40	94.7	98.1	2,948	430,394	433,342	317	16.1	62.6	446,116
Mit.	381	364	122	1,291	3.52	2.07	373	375	1.94	94.7	96.6	2,948	407,444	410,392	315	16.0	62.6	423,101
% Reduced	1%	< 0.5%	13%	1%	3%	41%	—	< 0.5%	43%	—	1%	—	5%	5%	1%	< 0.5%	—	5%

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	370	354	124	1,306	3.22	3.36	321	325	3.23	81.5	84.7	2,948	387,459	390,407	315	14.1	210	402,676
Mit.	368	353	106	1,298	3.11	1.90	321	323	1.76	81.5	83.2	2,948	364,508	367,456	313	14.0	210	379,662
% Reduced	1%	< 0.5%	15%	1%	4%	43%	—	< 0.5%	45%	—	2%	—	6%	6%	1%	< 0.5%	—	6%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	67.5	64.6	22.7	238	0.59	0.61	58.6	59.2	0.59	14.9	15.5	488	64,148	64,636	52.1	2.33	34.7	66,668
Mit.	67.1	64.4	19.4	237	0.57	0.35	58.6	59.0	0.32	14.9	15.2	488	60,349	60,837	51.8	2.32	34.7	62,857
% Reduced	1%	< 0.5%	15%	1%	4%	43%	—	< 0.5%	45%	—	2%	—	6%	6%	1%	< 0.5%	—	6%
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	137	250	550	250	—	—	100	—	—	67.0	—	—	—	—	—	—	—
Unmit.	—	Yes	No	Yes	No	—	—	Yes	—	—	Yes	—	—	—	—	—	—	—
Mit.	—	Yes	No	Yes	No	—	—	Yes	—	—	Yes	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	137	250	550	250	—	—	100	—	—	67.0	—	—	—	—	—	—	—
Unmit.	—	Yes	No	Yes	No	—	—	Yes	—	—	Yes	—	—	—	—	—	—	—
Mit.	—	Yes	No	Yes	No	—	—	Yes	—	—	Yes	—	—	—	—	—	—	—

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	212	196	110	1,366	3.69	2.02	373	375	1.89	94.7	96.6	—	375,359	375,359	15.5	13.8	419	380,287
Area	203	201	3.19	348	0.02	0.17	—	0.17	0.13	—	0.13	0.00	945	945	0.04	0.01	—	948
Energy	2.19	1.10	18.8	8.26	0.12	1.51	—	1.51	1.51	—	1.51	—	66,013	66,013	4.47	0.33	—	66,223
Water	—	—	—	—	—	—	—	—	—	—	—	429	5,801	6,230	44.3	1.08	—	7,661
Waste	—	—	—	—	—	—	—	—	—	—	—	2,519	0.00	2,519	252	0.00	—	8,813
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7	51.7
Total	417	398	132	1,723	3.82	3.71	373	377	3.53	94.7	98.2	2,948	448,118	451,066	316	15.3	471	463,984
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	210	194	121	1,290	3.52	2.02	373	375	1.89	94.7	96.6	—	358,580	358,580	16.4	14.7	10.9	363,367
Area	170	170	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	2.19	1.10	18.8	8.26	0.12	1.51	—	1.51	1.51	—	1.51	—	66,013	66,013	4.47	0.33	—	66,223
Water	—	—	—	—	—	—	—	—	—	—	—	429	5,801	6,230	44.3	1.08	—	7,661
Waste	—	—	—	—	—	—	—	—	—	—	—	2,519	0.00	2,519	252	0.00	—	8,813
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7	51.7
Total	383	366	140	1,299	3.64	3.53	373	377	3.40	94.7	98.1	2,948	430,394	433,342	317	16.1	62.6	446,116
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	181	167	104	1,126	3.09	1.76	321	323	1.65	81.5	83.1	—	315,179	315,179	14.1	12.7	158	319,460
Area	187	186	1.57	172	0.01	0.08	—	0.08	0.06	—	0.06	0.00	466	466	0.02	< 0.005	—	468
Energy	2.19	1.10	18.8	8.26	0.12	1.51	—	1.51	1.51	—	1.51	—	66,013	66,013	4.47	0.33	—	66,223
Water	—	—	—	—	—	—	—	—	—	—	—	429	5,801	6,230	44.3	1.08	—	7,661
Waste	—	—	—	—	—	—	—	—	—	—	—	2,519	0.00	2,519	252	0.00	—	8,813
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7	51.7
Total	370	354	124	1,306	3.22	3.36	321	325	3.23	81.5	84.7	2,948	387,459	390,407	315	14.1	210	402,676
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	33.0	30.5	19.0	205	0.56	0.32	58.6	59.0	0.30	14.9	15.2	—	52,181	52,181	2.33	2.10	26.2	52,890
Area	34.1	33.9	0.29	31.3	< 0.005	0.02	—	0.02	0.01	—	0.01	0.00	77.2	77.2	< 0.005	< 0.005	—	77.4
Energy	0.40	0.20	3.42	1.51	0.02	0.28	—	0.28	0.28	—	0.28	—	10,929	10,929	0.74	0.05	—	10,964
Water	—	—	—	—	—	—	—	—	—	—	—	71.0	960	1,031	7.33	0.18	—	1,268
Waste	—	—	—	—	—	—	—	—	—	—	—	417	0.00	417	41.7	0.00	—	1,459
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.56	8.56
Total	67.5	64.6	22.7	238	0.59	0.61	58.6	59.2	0.59	14.9	15.5	488	64,148	64,636	52.1	2.33	34.7	66,668

2.6. Operations Emissions by Sector, Mitigated

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

Sector	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	212	196	110	1,366	3.69	2.02	373	375	1.89	94.7	96.6	—	375,359	375,359	15.5	13.8	419	380,287
Area	203	201	3.19	348	0.02	0.17	—	0.17	0.13	—	0.13	0.00	945	945	0.04	0.01	—	948
Energy	0.07	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	43,062	43,062	2.44	0.29	—	43,209
Water	—	—	—	—	—	—	—	—	—	—	—	429	5,801	6,230	44.3	1.08	—	7,661
Waste	—	—	—	—	—	—	—	—	—	—	—	2,519	0.00	2,519	252	0.00	—	8,813
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7	51.7
Total	415	397	114	1,715	3.71	2.24	373	376	2.07	94.7	96.7	2,948	425,167	428,115	314	15.2	471	440,970
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	210	194	121	1,290	3.52	2.02	373	375	1.89	94.7	96.6	—	358,580	358,580	16.4	14.7	10.9	363,367
Area	170	170	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.07	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	43,062	43,062	2.44	0.29	—	43,209
Water	—	—	—	—	—	—	—	—	—	—	—	429	5,801	6,230	44.3	1.08	—	7,661
Waste	—	—	—	—	—	—	—	—	—	—	—	2,519	0.00	2,519	252	0.00	—	8,813

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7	51.7
Total	381	364	122	1,291	3.52	2.07	373	375	1.94	94.7	96.6	2,948	407,444	410,392	315	16.0	62.6	423,101
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	181	167	104	1,126	3.09	1.76	321	323	1.65	81.5	83.1	—	315,179	315,179	14.1	12.7	158	319,460
Area	187	186	1.57	172	0.01	0.08	—	0.08	0.06	—	0.06	0.00	466	466	0.02	< 0.005	—	468
Energy	0.07	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	43,062	43,062	2.44	0.29	—	43,209
Water	—	—	—	—	—	—	—	—	—	—	—	429	5,801	6,230	44.3	1.08	—	7,661
Waste	—	—	—	—	—	—	—	—	—	—	—	2,519	0.00	2,519	252	0.00	—	8,813
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7	51.7
Total	368	353	106	1,298	3.11	1.90	321	323	1.76	81.5	83.2	2,948	364,508	367,456	313	14.0	210	379,662
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	33.0	30.5	19.0	205	0.56	0.32	58.6	59.0	0.30	14.9	15.2	—	52,181	52,181	2.33	2.10	26.2	52,890
Area	34.1	33.9	0.29	31.3	< 0.005	0.02	—	0.02	0.01	—	0.01	0.00	77.2	77.2	< 0.005	< 0.005	—	77.4
Energy	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	7,129	7,129	0.40	0.05	—	7,154
Water	—	—	—	—	—	—	—	—	—	—	—	71.0	960	1,031	7.33	0.18	—	1,268
Waste	—	—	—	—	—	—	—	—	—	—	—	417	0.00	417	41.7	0.00	—	1,459
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.56	8.56
Total	67.1	64.4	19.4	237	0.57	0.35	58.6	59.0	0.32	14.9	15.2	488	60,349	60,837	51.8	2.32	34.7	62,857

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	96.1	88.5	52.1	655	1.80	0.98	183	184	0.92	46.3	47.2	—	183,199	183,199	7.26	6.58	205	185,547
Single Family Housing	43.4	39.9	23.5	296	0.81	0.44	82.4	82.9	0.41	20.9	21.3	—	82,652	82,652	3.28	2.97	92.6	83,710
Regional Shopping Center	43.3	40.9	18.4	211	0.51	0.29	50.6	50.9	0.27	12.8	13.1	—	51,825	51,825	2.69	2.25	56.8	52,619
Elementary School	11.5	10.5	6.37	80.8	0.22	0.12	22.8	22.9	0.11	5.78	5.90	—	22,826	22,826	0.89	0.81	25.6	23,114
City Park	17.5	16.1	9.73	123	0.34	0.19	34.8	35.0	0.17	8.83	9.00	—	34,857	34,857	1.35	1.23	39.1	35,297
Total	212	196	110	1,366	3.69	2.02	373	375	1.89	94.7	96.6	—	375,359	375,359	15.5	13.8	419	380,287
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	95.3	87.6	57.3	614	1.72	0.98	183	184	0.92	46.3	47.2	—	174,979	174,979	7.65	6.96	5.32	177,251
Single Family Housing	43.0	39.5	25.9	277	0.78	0.44	82.4	82.9	0.41	20.9	21.3	—	78,943	78,943	3.45	3.14	2.40	79,968
Regional Shopping Center	43.0	40.5	20.3	208	0.49	0.29	50.6	50.9	0.27	12.8	13.1	—	49,569	49,569	2.91	2.39	1.47	50,355
Elementary School	11.4	10.4	7.01	75.5	0.21	0.12	22.8	22.9	0.11	5.78	5.90	—	21,800	21,800	0.93	0.85	0.66	22,078

City Park	17.4	15.9	10.7	115	0.33	0.19	34.8	35.0	0.17	8.83	9.00	—	33,290	33,290	1.42	1.31	1.01	33,715
Total	210	194	121	1,290	3.52	2.02	373	375	1.89	94.7	96.6	—	358,580	358,580	16.4	14.7	10.9	363,367
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	16.3	15.0	9.79	107	0.30	0.17	31.3	31.4	0.16	7.93	8.09	—	27,735	27,735	1.19	1.08	13.9	28,102
Single Family Housing	7.57	6.96	4.54	49.5	0.14	0.08	14.5	14.6	0.07	3.68	3.75	—	12,869	12,869	0.55	0.50	6.47	13,039
Regional Shopping Center	6.04	5.70	2.76	28.4	0.07	0.04	6.65	6.69	0.04	1.69	1.72	—	6,066	6,066	0.36	0.30	2.97	6,166
Elementary School	1.47	1.34	0.90	9.86	0.03	0.02	2.93	2.95	0.01	0.74	0.76	—	2,596	2,596	0.11	0.10	1.31	2,630
City Park	1.64	1.51	1.01	11.1	0.03	0.02	3.29	3.31	0.02	0.83	0.85	—	2,915	2,915	0.12	0.11	1.47	2,953
Total	33.0	30.5	19.0	205	0.56	0.32	58.6	59.0	0.30	14.9	15.2	—	52,181	52,181	2.33	2.10	26.2	52,890

4.1.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	96.1	88.5	52.1	655	1.80	0.98	183	184	0.92	46.3	47.2	—	183,199	183,199	7.26	6.58	205	185,547
Single Family Housing	43.4	39.9	23.5	296	0.81	0.44	82.4	82.9	0.41	20.9	21.3	—	82,652	82,652	3.28	2.97	92.6	83,710

Regional Shopping Center	43.3	40.9	18.4	211	0.51	0.29	50.6	50.9	0.27	12.8	13.1	—	51,825	51,825	2.69	2.25	56.8	52,619
Elementary School	11.5	10.5	6.37	80.8	0.22	0.12	22.8	22.9	0.11	5.78	5.90	—	22,826	22,826	0.89	0.81	25.6	23,114
City Park	17.5	16.1	9.73	123	0.34	0.19	34.8	35.0	0.17	8.83	9.00	—	34,857	34,857	1.35	1.23	39.1	35,297
Total	212	196	110	1,366	3.69	2.02	373	375	1.89	94.7	96.6	—	375,359	375,359	15.5	13.8	419	380,287
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	95.3	87.6	57.3	614	1.72	0.98	183	184	0.92	46.3	47.2	—	174,979	174,979	7.65	6.96	5.32	177,251
Single Family Housing	43.0	39.5	25.9	277	0.78	0.44	82.4	82.9	0.41	20.9	21.3	—	78,943	78,943	3.45	3.14	2.40	79,968
Regional Shopping Center	43.0	40.5	20.3	208	0.49	0.29	50.6	50.9	0.27	12.8	13.1	—	49,569	49,569	2.91	2.39	1.47	50,355
Elementary School	11.4	10.4	7.01	75.5	0.21	0.12	22.8	22.9	0.11	5.78	5.90	—	21,800	21,800	0.93	0.85	0.66	22,078
City Park	17.4	15.9	10.7	115	0.33	0.19	34.8	35.0	0.17	8.83	9.00	—	33,290	33,290	1.42	1.31	1.01	33,715
Total	210	194	121	1,290	3.52	2.02	373	375	1.89	94.7	96.6	—	358,580	358,580	16.4	14.7	10.9	363,367
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	16.3	15.0	9.79	107	0.30	0.17	31.3	31.4	0.16	7.93	8.09	—	27,735	27,735	1.19	1.08	13.9	28,102
Single Family Housing	7.57	6.96	4.54	49.5	0.14	0.08	14.5	14.6	0.07	3.68	3.75	—	12,869	12,869	0.55	0.50	6.47	13,039

Regional	6.04	5.70	2.76	28.4	0.07	0.04	6.65	6.69	0.04	1.69	1.72	—	6,066	6,066	0.36	0.30	2.97	6,166
Elementary School	1.47	1.34	0.90	9.86	0.03	0.02	2.93	2.95	0.01	0.74	0.76	—	2,596	2,596	0.11	0.10	1.31	2,630
City Park	1.64	1.51	1.01	11.1	0.03	0.02	3.29	3.31	0.02	0.83	0.85	—	2,915	2,915	0.12	0.11	1.47	2,953
Total	33.0	30.5	19.0	205	0.56	0.32	58.6	59.0	0.30	14.9	15.2	—	52,181	52,181	2.33	2.10	26.2	52,890

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	24,513	24,513	1.37	0.17	—	24,597
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	13,874	13,874	0.78	0.09	—	13,921
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	2,714	2,714	0.15	0.02	—	2,723
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	1,154	1,154	0.06	0.01	—	1,158
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	42,255	42,255	2.37	0.29	—	42,400

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	24,513	24,513	1.37	0.17	—	24,597
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	13,874	13,874	0.78	0.09	—	13,921
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	2,714	2,714	0.15	0.02	—	2,723
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	1,154	1,154	0.06	0.01	—	1,158
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	42,255	42,255	2.37	0.29	—	42,400
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	4,058	4,058	0.23	0.03	—	4,072
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,297	2,297	0.13	0.02	—	2,305
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	449	449	0.03	< 0.005	—	451
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	191	191	0.01	< 0.005	—	192
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	6,996	6,996	0.39	0.05	—	7,020

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	24,515	24,515	1.37	0.17	—	24,599
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	13,879	13,879	0.78	0.09	—	13,927
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	2,714	2,714	0.15	0.02	—	2,723
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	1,154	1,154	0.06	0.01	—	1,158
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	42,262	42,262	2.37	0.29	—	42,407
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	24,515	24,515	1.37	0.17	—	24,599
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	13,879	13,879	0.78	0.09	—	13,927

Regional	—	—	—	—	—	—	—	—	—	—	—	—	2,714	2,714	0.15	0.02	—	2,723
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	1,154	1,154	0.06	0.01	—	1,158
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	42,262	42,262	2.37	0.29	—	42,407
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	4,059	4,059	0.23	0.03	—	4,073
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,298	2,298	0.13	0.02	—	2,306
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	449	449	0.03	< 0.005	—	451
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	191	191	0.01	< 0.005	—	192
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	6,997	6,997	0.39	0.05	—	7,021

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

Apartments	0.94	0.47	8.01	3.41	0.05	0.65	—	0.65	0.65	—	0.65	—	10,163	10,163	0.90	0.02	—	10,191
Single Family Housing	1.18	0.59	10.1	4.29	0.06	0.81	—	0.81	0.81	—	0.81	—	12,795	12,795	1.13	0.02	—	12,830
Regional Shopping Center	0.02	0.01	0.22	0.19	< 0.005	0.02	—	0.02	0.02	—	0.02	—	265	265	0.02	< 0.005	—	265
Elementary School	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	537
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	2.19	1.10	18.8	8.26	0.12	1.51	—	1.51	1.51	—	1.51	—	23,758	23,758	2.10	0.04	—	23,824
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.94	0.47	8.01	3.41	0.05	0.65	—	0.65	0.65	—	0.65	—	10,163	10,163	0.90	0.02	—	10,191
Single Family Housing	1.18	0.59	10.1	4.29	0.06	0.81	—	0.81	0.81	—	0.81	—	12,795	12,795	1.13	0.02	—	12,830
Regional Shopping Center	0.02	0.01	0.22	0.19	< 0.005	0.02	—	0.02	0.02	—	0.02	—	265	265	0.02	< 0.005	—	265
Elementary School	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	537
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	2.19	1.10	18.8	8.26	0.12	1.51	—	1.51	1.51	—	1.51	—	23,758	23,758	2.10	0.04	—	23,824
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	0.17	0.09	1.46	0.62	0.01	0.12	—	0.12	0.12	—	0.12	—	1,683	1,683	0.15	< 0.005	—	1,687
Single Family Housing	0.22	0.11	1.84	0.78	0.01	0.15	—	0.15	0.15	—	0.15	—	2,118	2,118	0.19	< 0.005	—	2,124
Regional Shopping Center	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	43.8	43.8	< 0.005	< 0.005	—	43.9
Elementary School	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.6	88.6	0.01	< 0.005	—	88.8
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.42	1.51	0.02	0.28	—	0.28	0.28	—	0.28	—	3,933	3,933	0.35	0.01	—	3,944

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Regional Shopping Center	0.02	0.01	0.22	0.19	< 0.005	0.02	—	0.02	0.02	—	0.02	—	265	265	0.02	< 0.005	—	265

Elementary	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	537
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.07	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	800	800	0.07	< 0.005	—	802
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Regional Shopping Center	0.02	0.01	0.22	0.19	< 0.005	0.02	—	0.02	0.02	—	0.02	—	265	265	0.02	< 0.005	—	265
Elementary School	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	537
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.07	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	800	800	0.07	< 0.005	—	802
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Regional Shopping Center	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	43.8	43.8	< 0.005	< 0.005	—	43.9

Element School	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.6	88.6	0.01	< 0.005	—	88.8
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	132	132	0.01	< 0.005	—	133

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	158	158	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.6	12.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	32.8	31.0	3.19	348	0.02	0.17	—	0.17	0.13	—	0.13	—	945	945	0.04	0.01	—	948
Total	203	201	3.19	348	0.02	0.17	—	0.17	0.13	—	0.13	0.00	945	945	0.04	0.01	—	948
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer Products	158	158	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.6	12.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	170	170	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	28.8	28.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.30	2.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.95	2.79	0.29	31.3	< 0.005	0.02	—	0.02	0.01	—	0.01	—	77.2	77.2	< 0.005	< 0.005	—	77.4
Total	34.1	33.9	0.29	31.3	< 0.005	0.02	—	0.02	0.01	—	0.01	0.00	77.2	77.2	< 0.005	< 0.005	—	77.4

4.3.2. Mitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	158	158	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	12.6	12.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	32.8	31.0	3.19	348	0.02	0.17	—	0.17	0.13	—	0.13	—	945	945	0.04	0.01	—	948
Total	203	201	3.19	348	0.02	0.17	—	0.17	0.13	—	0.13	0.00	945	945	0.04	0.01	—	948
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	158	158	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.6	12.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	170	170	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	28.8	28.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.30	2.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.95	2.79	0.29	31.3	< 0.005	0.02	—	0.02	0.01	—	0.01	—	77.2	77.2	< 0.005	< 0.005	—	77.4
Total	34.1	33.9	0.29	31.3	< 0.005	0.02	—	0.02	0.01	—	0.01	0.00	77.2	77.2	< 0.005	< 0.005	—	77.4

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	302	1,956	2,257	31.0	0.75	—	3,256
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	94.3	3,105	3,199	9.84	0.25	—	3,520
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	27.1	160	187	2.79	0.07	—	277
Elementary School	—	—	—	—	—	—	—	—	—	—	—	5.89	85.0	90.8	0.61	0.01	—	111
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	496	496	0.03	< 0.005	—	497
Total	—	—	—	—	—	—	—	—	—	—	—	429	5,801	6,230	44.3	1.08	—	7,661
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	302	1,956	2,257	31.0	0.75	—	3,256
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	94.3	3,105	3,199	9.84	0.25	—	3,520

Regional	—	—	—	—	—	—	—	—	—	—	—	27.1	160	187	2.79	0.07	—	277
Elementary School	—	—	—	—	—	—	—	—	—	—	—	5.89	85.0	90.8	0.61	0.01	—	111
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	496	496	0.03	< 0.005	—	497
Total	—	—	—	—	—	—	—	—	—	—	—	429	5,801	6,230	44.3	1.08	—	7,661
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	49.9	324	374	5.14	0.12	—	539
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	15.6	514	530	1.63	0.04	—	583
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	4.48	26.5	31.0	0.46	0.01	—	45.8
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.98	14.1	15.0	0.10	< 0.005	—	18.3
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	82.0	82.0	< 0.005	< 0.005	—	82.3
Total	—	—	—	—	—	—	—	—	—	—	—	71.0	960	1,031	7.33	0.18	—	1,268

4.4.2. Mitigated

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

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

Apartments	—	—	—	—	—	—	—	—	—	—	—	302	1,956	2,257	31.0	0.75	—	3,256
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	94.3	3,105	3,199	9.84	0.25	—	3,520
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	27.1	160	187	2.79	0.07	—	277
Elementary School	—	—	—	—	—	—	—	—	—	—	—	5.89	85.0	90.8	0.61	0.01	—	111
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	496	496	0.03	< 0.005	—	497
Total	—	—	—	—	—	—	—	—	—	—	—	429	5,801	6,230	44.3	1.08	—	7,661
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	302	1,956	2,257	31.0	0.75	—	3,256
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	94.3	3,105	3,199	9.84	0.25	—	3,520
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	27.1	160	187	2.79	0.07	—	277
Elementary School	—	—	—	—	—	—	—	—	—	—	—	5.89	85.0	90.8	0.61	0.01	—	111
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	496	496	0.03	< 0.005	—	497
Total	—	—	—	—	—	—	—	—	—	—	—	429	5,801	6,230	44.3	1.08	—	7,661
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	—	—	—	—	—	—	—	—	—	—	—	49.9	324	374	5.14	0.12	—	539
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	15.6	514	530	1.63	0.04	—	583
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	4.48	26.5	31.0	0.46	0.01	—	45.8
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.98	14.1	15.0	0.10	< 0.005	—	18.3
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	82.0	82.0	< 0.005	< 0.005	—	82.3
Total	—	—	—	—	—	—	—	—	—	—	—	71.0	960	1,031	7.33	0.18	—	1,268

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,785	0.00	1,785	178	0.00	—	6,246
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	499	0.00	499	49.9	0.00	—	1,746

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	378
Elementary School	—	—	—	—	—	—	—	—	—	—	—	125	0.00	125	12.5	0.00	—	436
City Park	—	—	—	—	—	—	—	—	—	—	—	1.85	0.00	1.85	0.19	0.00	—	6.49
Total	—	—	—	—	—	—	—	—	—	—	—	2,519	0.00	2,519	252	0.00	—	8,813
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,785	0.00	1,785	178	0.00	—	6,246
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	499	0.00	499	49.9	0.00	—	1,746
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	378
Elementary School	—	—	—	—	—	—	—	—	—	—	—	125	0.00	125	12.5	0.00	—	436
City Park	—	—	—	—	—	—	—	—	—	—	—	1.85	0.00	1.85	0.19	0.00	—	6.49
Total	—	—	—	—	—	—	—	—	—	—	—	2,519	0.00	2,519	252	0.00	—	8,813
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	296	0.00	296	29.5	0.00	—	1,034

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	82.6	0.00	82.6	8.26	0.00	—	289
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	17.9	0.00	17.9	1.79	0.00	—	62.5
Elementary School	—	—	—	—	—	—	—	—	—	—	—	20.6	0.00	20.6	2.06	0.00	—	72.2
City Park	—	—	—	—	—	—	—	—	—	—	—	0.31	0.00	0.31	0.03	0.00	—	1.07
Total	—	—	—	—	—	—	—	—	—	—	—	417	0.00	417	41.7	0.00	—	1,459

4.5.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,785	0.00	1,785	178	0.00	—	6,246
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	499	0.00	499	49.9	0.00	—	1,746
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	378
Elementary School	—	—	—	—	—	—	—	—	—	—	—	125	0.00	125	12.5	0.00	—	436

City Park	—	—	—	—	—	—	—	—	—	—	—	1.85	0.00	1.85	0.19	0.00	—	6.49
Total	—	—	—	—	—	—	—	—	—	—	—	2,519	0.00	2,519	252	0.00	—	8,813
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,785	0.00	1,785	178	0.00	—	6,246
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	499	0.00	499	49.9	0.00	—	1,746
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	378
Elementary School	—	—	—	—	—	—	—	—	—	—	—	125	0.00	125	12.5	0.00	—	436
City Park	—	—	—	—	—	—	—	—	—	—	—	1.85	0.00	1.85	0.19	0.00	—	6.49
Total	—	—	—	—	—	—	—	—	—	—	—	2,519	0.00	2,519	252	0.00	—	8,813
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	296	0.00	296	29.5	0.00	—	1,034
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	82.6	0.00	82.6	8.26	0.00	—	289
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	17.9	0.00	17.9	1.79	0.00	—	62.5

Elementary School	—	—	—	—	—	—	—	—	—	—	—	20.6	0.00	20.6	2.06	0.00	—	72.2
City Park	—	—	—	—	—	—	—	—	—	—	—	0.31	0.00	0.31	0.03	0.00	—	1.07
Total	—	—	—	—	—	—	—	—	—	—	—	417	0.00	417	41.7	0.00	—	1,459

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.8	30.8
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.6	19.6
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7	51.7

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.8	30.8
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.6	19.6
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7	51.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.10	5.10
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.24	3.24
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.56	8.56

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.8	30.8
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.6	19.6
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7	51.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.8	30.8
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.6	19.6

Regional	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.7	51.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.10	5.10
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.24	3.24
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.56	8.56

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

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

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

4.8.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	31,360	28,305	23,578	10,881,298	258,886	233,663	194,641	89,828,171
Single Family Housing	14,000	14,148	12,680	5,048,906	115,574	116,798	104,678	41,680,138
Regional Shopping Center	13,356	16,317	7,465	4,722,188	52,449	71,640	32,775	19,118,687
Elementary School	3,677	0.00	0.00	958,699	32,305	0.00	0.00	8,422,459
City Park	2,000	5,026	5,615	1,076,282	17,571	44,152	49,333	9,455,465

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	31,360	28,305	23,578	10,881,298	258,886	233,663	194,641	89,828,171
Single Family Housing	14,000	14,148	12,680	5,048,906	115,574	116,798	104,678	41,680,138

Regional Shopping Center	13,356	16,317	7,465	4,722,188	52,449	71,640	32,775	19,118,687
Elementary School	3,677	0.00	0.00	958,699	32,305	0.00	0.00	8,422,459
City Park	2,000	5,026	5,615	1,076,282	17,571	44,152	49,333	9,455,465

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	4480
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1400
Conventional Wood Stoves	0
Catalytic Wood Stoves	0

Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	4480
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1400
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
14237370	4,745,790	672,197	224,066	0.00

5.10.3. Landscape Equipment

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

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	15,191,097	589	0.0330	0.0040	31,711,395
Single Family Housing	8,597,789	589	0.0330	0.0040	39,923,707
Regional Shopping Center	1,681,818	589	0.0330	0.0040	825,671
Elementary School	715,130	589	0.0330	0.0040	1,669,568
City Park	0.00	589	0.0330	0.0040	0.00

5.11.2. Mitigated

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

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

Apartments Mid Rise	15,192,456	589	0.0330	0.0040	0.00
Single Family Housing	8,601,015	589	0.0330	0.0040	0.00
Regional Shopping Center	1,681,818	589	0.0330	0.0040	825,671
Elementary School	715,130	589	0.0330	0.0040	1,669,568
City Park	0.00	589	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	157,396,176	26,484,379
Single Family Housing	49,186,305	299,510,928
Regional Shopping Center	14,133,037	567,878
Elementary School	3,073,936	5,977,665
City Park	0.00	57,863,802

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	157,396,176	26,484,379
Single Family Housing	49,186,305	299,510,928
Regional Shopping Center	14,133,037	567,878
Elementary School	3,073,936	5,977,665
City Park	0.00	57,863,802

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)

Apartments Mid Rise	3,313	—
Single Family Housing	926	—
Regional Shopping Center	200	—
Elementary School	231	—
City Park	3.44	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	3,313	—
Single Family Housing	926	—
Regional Shopping Center	200	—
Elementary School	231	—
City Park	3.44	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.14.2. Mitigated

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

Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	5.54	annual days of extreme heat
Extreme Precipitation	3.00	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	40.0
AQ-PM	93.0
AQ-DPM	38.7
Drinking Water	24.5
Lead Risk Housing	24.7
Pesticides	0.00
Toxic Releases	91.5
Traffic	99.7
Effect Indicators	—
CleanUp Sites	61.4
Groundwater	72.5
Haz Waste Facilities/Generators	89.1
Impaired Water Bodies	98.4
Solid Waste	86.5
Sensitive Population	—
Asthma	37.8
Cardio-vascular	27.3
Low Birth Weights	14.4
Socioeconomic Factor Indicators	—

Education	70.2
Housing	26.7
Linguistic	70.5
Poverty	38.3
Unemployment	36.4

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	60.69549596
Employed	60.78532016
Median HI	69.70358014
Education	—
Bachelor's or higher	46.81124086
High school enrollment	100
Preschool enrollment	21.86577698
Transportation	—
Auto Access	61.56807391
Active commuting	58.06493007
Social	—
2-parent households	19.4661876
Voting	31.14333376
Neighborhood	—
Alcohol availability	66.71371744
Park access	58.3472347
Retail density	24.25253433
Supermarket access	40.29257026

Tree canopy	7.724881304
Housing	—
Homeownership	69.11330681
Housing habitability	64.00615937
Low-inc homeowner severe housing cost burden	97.12562556
Low-inc renter severe housing cost burden	65.61016297
Uncrowded housing	18.27280893
Health Outcomes	—
Insured adults	40.25407417
Arthritis	91.0
Asthma ER Admissions	65.1
High Blood Pressure	91.1
Cancer (excluding skin)	89.7
Asthma	80.2
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	92.7
Diagnosed Diabetes	47.0
Life Expectancy at Birth	8.6
Cognitively Disabled	33.5
Physically Disabled	50.9
Heart Attack ER Admissions	81.5
Mental Health Not Good	52.8
Chronic Kidney Disease	45.1
Obesity	43.5
Pedestrian Injuries	99.9
Physical Health Not Good	57.2
Stroke	88.3
Health Risk Behaviors	—

Binge Drinking	18.0
Current Smoker	70.0
No Leisure Time for Physical Activity	43.7
Climate Change Exposures	—
Wildfire Risk	87.5
SLR Inundation Area	0.0
Children	25.4
Elderly	90.0
English Speaking	39.4
Foreign-born	73.4
Outdoor Workers	55.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	66.4
Traffic Density	100.0
Traffic Access	52.4
Other Indices	—
Hardship	61.3
Other Decision Support	—
2016 Voting	35.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	57.0
Healthy Places Index Score for Project Location (b)	52.0
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	OMCP Adopted Land Uses
Operations: Vehicle Data	Trip rates obtained from traffic analysis Weekend trip rates adjusted proportionately
Operations: Hearths	No fireplaces or wood stoves

ATTACHMENT 8

AERSCREEN Output

Construction Health Risk Calculations

Annual PM Exhaust Generation

Annual Tons/Year	Pounds/year	lbs/day	lbs/hr	g/day	sec/day	g/sec
0.16721	334.4296521	9.16E-01	3.82E-02	416	86,400	4.81E-03

Max 1-hour concentration	1.02E 02	μg/m³
Annualized average concentration (0.08)	8.16E 04	μg/m³

Onsite Maximum Exposure	3rd Trimester	0<2	2<9	2<16	16<30	16-70
Cair	8.16E-04	8.16E-04	8.16E-04	8.16E-04	8.16E-04	8.16E-04
DBR	361	1090	861	745	335	290
A	1	1	1	1	1	1
EF	0.96	0.96	0.96	0.96	0.96	0.96
Dose-air	2.83E-07	8.54E-07	6.74E-07	5.84E-07	2.62E-07	2.27E-07
CPF	1.10	1.10	1.10	1.10	1.10	1.10
ASF	10	10	3	3	1	1
ED (years of construction = 20)	0.25	2.000	7.000	14.000	14.000	20.000
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk in 1 mill	0.01	0.23	0.16	0.28	0.04	0.05
	5.00	5.00	5.00	5.00	5.00	5.00
Chronic Exposure	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

0-9	0.40	9.25
0-30	0.56	30.25
0-70	0.57	36.25

AERSCREEN 11126 / AERMOD 1206 03/11/24
14:54:28

TITLE: SOUTHWEST VILLAGE

**************************** VOLUME PARAMETERS ****************************

SOURCE EMISSION RATE: 0.481E-02 g/s 0.382E-01 lb/hr
VOLUME HEIGHT: 4.27 meters 14.01 feet
INITIAL LATERAL DIMENSION: 1500.00 meters 4921.26 feet
INITIAL VERTICAL DIMENSION: 1500.00 meters 4921.26 feet
RURAL OR URBAN: URBAN
POPULATION: 20000

FLAGPOLE RECEPTOR HEIGHT: 1.50 meters 4.92 feet

INITIAL PROBE DISTANCE = 5000. meters 16404. feet

*********************** BUILDING DOWNWASH PARAMETERS **********************

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

************************** PROBE ANALYSIS **************************
25 meter receptor spacing: 3226. meters - 5000. meters

Zo SECTOR	ROUGHNESS LENGTH	1-HR CONC (ug/m3)	DIST (m)	TEMPORAL PERIOD
1*	1.000	0.1020E-01	3226.0	WIN

* = worst case flow sector

********************** MAKEMET METEOROLOGY PARAMETERS *********************

MIN/MAX TEMPERATURE: 277.6 / 306.5 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50
ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

```
YR MO DY JDY HR
-- -- -- --- --
10 01 16  16 01

  H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-0.40  0.043 -9.000  0.020 -999.   21.     19.1 1.000   1.50   0.35    0.50

  HT  REF TA    HT
- - - - - - - - - - -
 10.0   306.5    2.0
```

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

```
YR MO DY JDY HR
-- -- -- --- --
10 01 16  16 01

  H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-0.40  0.043 -9.000  0.020 -999.   21.     19.1 1.000   1.50   0.35    0.50

  HT  REF TA    HT
- - - - - - - - - - -
 10.0   306.5    2.0
```

************************ AERSCREEN AUTOMATED DISTANCES **********************
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
3226.00	0.1020E-01	4125.00	0.9007E-02
3250.00	0.1016E-01	4150.00	0.8980E-02
3275.00	0.1012E-01	4175.00	0.8953E-02

3300.00	0.1008E-01	4200.00	0.8926E-02
3325.00	0.1004E-01	4225.00	0.8900E-02
3350.00	0.1000E-01	4250.00	0.8874E-02
3375.00	0.9964E-02	4275.00	0.8848E-02
3400.00	0.9927E-02	4300.00	0.8823E-02
3425.00	0.9890E-02	4325.00	0.8798E-02
3450.00	0.9853E-02	4350.00	0.8773E-02
3475.00	0.9817E-02	4375.00	0.8756E-02
3500.00	0.9781E-02	4400.00	0.8748E-02
3525.00	0.9746E-02	4425.00	0.8739E-02
3550.00	0.9711E-02	4450.00	0.8731E-02
3575.00	0.9676E-02	4475.00	0.8723E-02
3600.00	0.9642E-02	4500.00	0.8715E-02
3625.00	0.9609E-02	4525.00	0.8706E-02
3650.00	0.9575E-02	4550.00	0.8698E-02
3675.00	0.9542E-02	4575.00	0.8690E-02
3700.00	0.9510E-02	4600.00	0.8682E-02
3725.00	0.9478E-02	4625.00	0.8674E-02
3750.00	0.9446E-02	4650.00	0.8666E-02
3775.00	0.9414E-02	4675.00	0.8658E-02
3800.00	0.9383E-02	4700.00	0.8650E-02
3825.00	0.9352E-02	4725.00	0.8642E-02
3850.00	0.9322E-02	4750.00	0.8634E-02
3875.00	0.9292E-02	4775.00	0.8626E-02
3900.00	0.9262E-02	4800.00	0.8618E-02
3925.00	0.9232E-02	4825.00	0.8610E-02
3950.00	0.9203E-02	4850.00	0.8603E-02
3975.00	0.9174E-02	4875.00	0.8595E-02
4000.00	0.9146E-02	4900.00	0.8587E-02
4025.00	0.9117E-02	4925.00	0.8579E-02
4050.00	0.9089E-02	4950.00	0.8572E-02
4075.00	0.9061E-02	4975.00	0.8564E-02
4100.00	0.9034E-02	5000.00	0.8556E-02

********************* AERSCREEN MAXIMUM IMPACT SUMMARY ********************

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	1.02E-02	1.02E-02	9.18E-03	6.12E-03	1.02E-03

DISTANCE FROM SOURCE 3226.00 meters

IMPACT AT THE
AMBIENT BOUNDARY 0.1020E-01 0.1020E-01 0.9178E-02 0.6119E-02 0.1020E-02

DISTANCE FROM SOURCE 3226.00 meters