

To: City of Redlands

From: Maryam Javanmardi, Tina Yuan, EPD Solutions, Inc.

Date: 3/13/2026

Re: Air Quality, Energy, and Greenhouse Gas Impact Analysis for the Pioneer Park Specific Plan Project, EPD Project Number 25-124

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## Project Overview

The Project (“Project,” or “proposed Project”) is situated in the northern portion of the City of Redlands within San Bernardino County. The Project site is located east of State Route 210 (SR-210), north of West San Bernardino Avenue, south of West Pioneer Avenue and is bisected by Tennessee Avenue. Regional access to the site is provided via SR-210 and Interstate 10 (I-10). Local access to the Project site is provided via West San Bernardino Avenue and West Pioneer Avenue. The Project is located within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The proposed Project site location is identified in Figure 1, *Local Vicinity*.

The Project site encompasses approximately 35.31 gross acres (30.98 net acres), inclusive of four parcels identified by Assessor’s Parcel Numbers (APNs) 0167-091-09, -10, -11, and -042. The proposed Specific Plan would include two zoning designations: Single-Family Residential (SFR) with an allowed density range of 8–9 du/ac, and Multiple-Family Residential (MFR) with an allowed density range of 16–17 du/ac. The proposed Specific Plan would allow for a maximum of 275 single-family residences and seven multifamily units, for a total of 282 residences. Each single-family residence within the Specific Plan Area would include parking within a two-car garage or carport, with multifamily residences within the Specific Plan Area parked based on unit size in either a garage, carport, and/or unenclosed parking configuration. In addition to the specific single-family and multifamily spaces, unassigned and uncovered guest spaces in designated parking areas as well as on-street parking spaces along the on-site neighborhood streets would be available throughout the Specific Plan area. The proposed site layout is illustrated in Figure 2, *Project Tentative Tract Map*.

To support the CEQA document for the proposed Project, this report analyzes the proposed Project’s construction and net operational impacts related to air quality (emission of criteria pollutants), energy, and greenhouse gas (GHG) emissions using the California Emissions Estimator Model (CalEEMod Version 2022.1) and the Emission Factor model (EMFAC Version 2021). Table 1, *Construction Schedule*, shows the estimated construction schedule, which is expected to last about 20 months.

**Table 1: Construction Schedule**

Activity	Start Date	End Date	Total Working Days
Site Preparation	3/1/2027	4/9/2027	30
Grading	4/10/2027	6/25/2027	55
Building Construction	6/26/2027	8/18/2028	300
Paving	6/26/2027	9/10/2027	55
Architectural Coating	8/11/2028	10/26/2028	55

Source: CalEEMod Output Sheets (Attachment A)

### CalEEMod Modeling Details

The following non-default assumptions were used in CalEEMod for this analysis:

- **Land Use:** The lot acreage was adjusted to match the CalEEMod defaults and information provided by the applicant.
- **Construction Schedule:** The demolition phase was removed as the site is currently vacant. The grading phase was reduced from 75 to 55 days, and the building construction duration was shortened from 740 to 300 days to meet the Project's anticipated operational year. Additionally, the paving phase was revised to begin concurrently with building construction. Architectural coating was set to begin approximately one week before the completion of building construction, and span the CalEEMod-default assumption of 55 days.
- **Construction Equipment:** It was assumed that all equipment would be used for 8 hours per workday. Tractor/loaders/backhoes were replaced with crawler tractors in the site preparation and grading construction phases to accurately measure acres disturbed.
- **Construction Earthmoving Activity:** Based on the preliminary grading plan, the Project would require the export of approximately 8,395 cubic yards (CY) of material during the grading phase.
- **Demolition During Site Preparation:** The demolition of the existing roadway across the site is anticipated to generate approximately 2,248 tons of debris during the site preparation phase. Supporting calculations are provided in Attachment C, *Demolition Calculation Sheet*.
- **Operational Hearths:** The Project proposes to develop 282 gas-burning fireplaces in 275 single-family dwelling units and the seven multifamily apartment units. Wood stoves and wood fireplaces were removed in accordance with SCAQMD Rule 445, which prohibits the installation of wood-burning devices in an effort to reduce particulate matter and reduce production of volatile organic compounds (VOCs).<sup>1</sup>
- **Operational Vehicle Data:** The trip rate was adjusted to match the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*, auto trip rates for weekday, Saturday, and Sunday trip rates for Single-Family Detached (ITE Land Use Code 210) for the 255 single-family units and Multifamily Housing Low Rise (ITE Land Use Code 220) for the seven multifamily apartment dwelling units proposed for the Project.<sup>2</sup>

<sup>1</sup> SCAQMD. (2020). *Rule 445, Wood-Burning Devices*. Referenced at <https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-445.pdf>

<sup>2</sup> EPD Solutions, Inc. (2025). *25-124 Pioneer Park Vehicles Miles Traveled (VMT) Screening Memo*.

- Measure E-10-B, Establish Onsite Renewable Energy Systems:** Solar power was added because onsite solar is required for new residential buildings under the 2022 Title 24 California Building Standards Code (PPP GHG-2). The Project was evaluated based on the 2022 Title 24 requirements in place at the time of analysis and project design; however, the Project would be required to comply with the 2025 Title 24 (or later) standards in effect at the time of building permit issuance. Below is the calculation used to determine the minimum amount of solar recommended by Title 24.

$$\text{Size of PV system (kWpV)} = (\text{CFA} \times \text{A}) / 1000 + (\text{NDwell} \times \text{B})$$

Where:

CFA = Conditioned floor area, assumed to represent 10 percent of the total lot area.

NDwell = Total number of dwelling units, consisting of 275 single-family residences and 7 multifamily units (282 units total).

A = CFA Adjustment Factor (Climate Zone 10 = 0.627)

B = Dwelling Unit Adjustment Factor (Climate Zone 10 = 1.41)

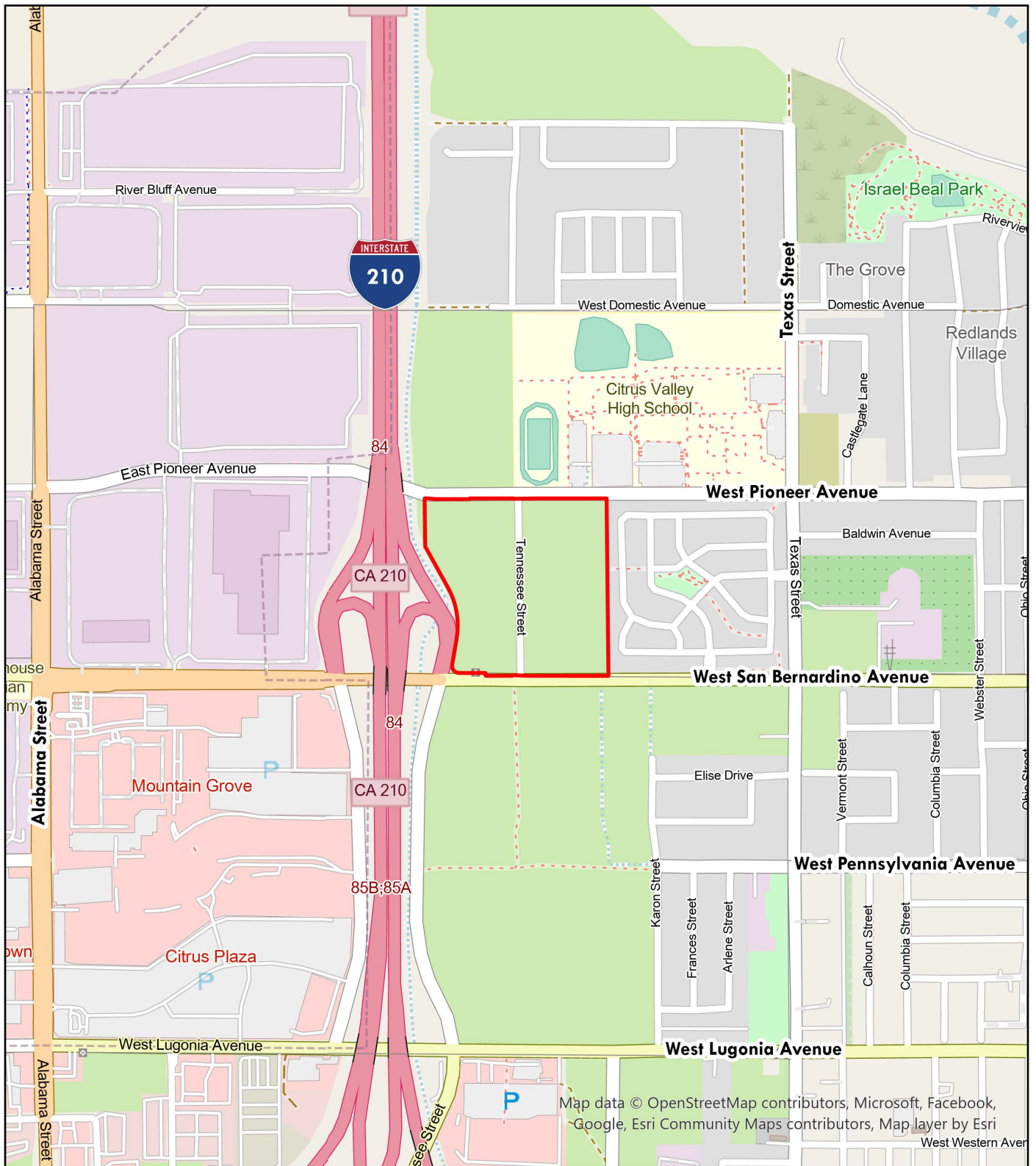
#### *EMFAC Off-Model Adjustment Factors*

CARB EMFAC2021 (“EMFAC2021”) currently accounts for emissions reductions attributed to compliance with several regulations: the Advanced Clean Trucks Regulation, Zero-Emission Airport Shuttle Regulation, Heavy-Duty Warranty Amendments (Phase 1), and the Heavy-Duty Omnibus Regulation. On June 12, 2025, three congressional resolutions were signed into law to disapprove previously approved preemption waivers which allowed the enforcement of these regulations. Therefore, the California Air Resources Board (CARB) released the EMFAC2021 Off-Model Adjustment Factors (Adjustment Factors), which negates emissions reductions attributed to these regulations. On November 21, 2025, the United States Environmental Protection Agency (USEPA) approved use of the Adjustment Factors.<sup>3</sup> These factors are provided for each vehicle under EMFAC2021’s vehicle categories, for every year from 2022 to 2050. In addition, factors are provided for different fuel types (diesel, gas, natural gas, electric, and plug-in hybrid electric).

CalEEMod v. 2022.1 uses emissions data from EMFAC2021. However, CalEEMod has not yet incorporated the Adjustment Factors due to the recency of its approval. To account for the potential increase in emissions, diesel Adjustment Factors from the construction years of 2027 through 2028 were applied to construction off-site emissions from hauling and vendor trips. Adjustment Factors were not applied to the operational mobile emissions, since only truck regulations were repealed, and the proposed residential use of the Project is not a truck-intensive use. Calculations to obtain the adjusted emission rates are provided in Appendix B.

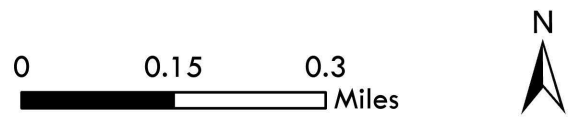
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<sup>3</sup> USEPA. (November 2025). EPA Off-Model Adjustment Factors Approval Letter. Referenced at <https://ww2.arb.ca.gov/sites/default/files/2025-12/EPA%20Off-Model%20Adjustment%20Factors%20Approval%20Letter.pdf>



**Legend**

 Project Boundary





## Summary of Air Quality, Energy and GHG Impacts

### Air Quality

The proposed Project's maximum daily emissions (regional and local) for construction and operation would not exceed the SCAQMD's regional thresholds of significance. In addition, all construction activities would comply with applicable SCAQMD rules and regulations, including Rule 402, Rule 403, Rule 445, and Rule 1113:

- Rule 402, *Public Nuisance*: Prohibits the discharge of air contaminants that cause injury, nuisance, or annoyance to the public or damage to property.
- Rule 403, *Fugitive Dust*: Aims to minimize fugitive particulate matter dust emissions during construction activities.
- Rule 445, *Wood-Burning Devices*: Reduces emission production of particulate matter and volatile organic compounds from wood burning devices.
- Rule 1113, *Architectural Coatings*: Allows only low-VOC paints to be used.

The construction and operation of the proposed Project would not exceed SCAQMD thresholds for any of the six criteria pollutants. Projects that do not exceed the regional thresholds are assumed to not have a significant impact on both a project level and cumulative level. The proposed Project aligns with SCAQMD'S 2022 Air Quality Management Plan (AQMP), reflecting adherence to regional air quality management goals and standards. Furthermore, odors produced by the construction and operation of the proposed Project would be minimal and comply with SCAQMD Rule 402. Therefore, the proposed Project would have a less-than-significant air quality impact. No mitigation would be required.

### Energy

Construction activities related to the proposed Project and the associated infrastructure are not expected to result in demand for fuel greater on a per-unit-of-development basis than any other development projects in Southern California. The proposed Project's energy consumption during construction activities would comply with existing fuel standards, machinery efficiency requirements, and California Air Resources Board (CARB) regulations limiting truck idling. Additionally, for operation, the proposed Project would be required to meet the California Code of Regulations (CCR) Title 24 energy efficiency standards and comply with all applicable County energy codes. The Project buildings would also be solar-ready in compliance with current Title 24 requirements. There are no unusual Project characteristics that would cause the construction or operation of the Project to be less energy-efficient when compared with other similar developments throughout the state. Therefore, the proposed Project would not result in impacts related to inefficient, wasteful, or unnecessary consumption of energy, nor would the Project inhibit the use of renewable energy. Impacts related to energy would be less than significant.

### GHG Emissions

The construction and operational GHG emissions of the proposed Project would result in a total of 3,318 MTCO<sub>2</sub>e per year. Based on an average household size of 2.65 persons for the City of Redlands, the Project would result in a direct population increase of approximately 748 persons. As such, the Project's emissions would be 4.44 MTCO<sub>2</sub>e per service population per year, which is below the City's Climate Action Plan's (CAP) Year 2030 6.0 MTCO<sub>2</sub>e per service population per year target. The Project is consistent with the City

of Redlands General Plan and CAP, which incorporates the 2022 CARB Scoping Plan and aligns with the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The Project would implement applicable GHG reduction measures and would not interfere with plans, policies, or regulations adopted to reduce GHG emissions. Overall, the Project's GHG emissions impacts would be less than significant.

## Air Quality

### Regional Emissions

The SCAQMD has adopted maximum daily emission thresholds (pounds/day) for criteria pollutants during the construction and operation of a project.<sup>4</sup> While incremental regional air quality impacts of an individual project are generally very small and difficult to measure, SCAQMD's regional maximum emission thresholds set standards to reduce the burden of SCAQMD to attain and maintain ambient air quality standards. The regional thresholds apply to the criteria pollutants listed in Table 2, *Regional Construction Emission Estimates*, and Table 3, *Regional Operation Emission Estimates*.

Table 2 shows the CalEEMod estimated emissions for Project construction. The estimated Project emissions include those generated both from on-site sources (such as off-road construction equipment and fugitive dust) and off-site sources (vehicles traveling to and from the site). Tables 3 shows the CalEEMod estimated Project emissions for operation. As shown in Table 2, the proposed Project would not exceed SCAQMD's thresholds for construction emissions. Therefore, the Project would have less-than-significant regional air quality impacts related to construction. Additionally, as shown in Table 3, the Project's operational emissions would not exceed the SCAQMD's thresholds for any of the criteria pollutants. Therefore, the Project would have a less-than-significant regional air quality impact related to operation.

**Table 2: Regional Construction Emission Estimates**

Maximum Daily Emissions	Maximum Daily Regional Emissions (pounds/day)*					
	ROG	NOx	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Maximum Daily Emission 2027 <sup>1</sup>	3.74	34.25	36.70	0.07	8.91	4.50
Maximum Daily Emission 2028 <sup>1</sup>	65.95	12.98	28.41	0.04	3.35	1.05
<b>Maximum Daily Emission (2027-2028)</b>	<b>65.95</b>	<b>34.25</b>	<b>36.70</b>	<b>0.07</b>	<b>8.91</b>	<b>4.50</b>
SCAQMD Significance Thresholds	75	100	550	150	150	55
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: ROG = reactive organic gases, NOx = nitrogen oxides, CO = carbon monoxide, SO<sub>2</sub> = sulfur dioxide, PM<sub>10</sub> = particulate matter 10 microns in diameter, PM<sub>2.5</sub> = particulate matter 2.5 microns in diameter

\* The higher emissions from the winter and summer scenarios are presented. Values may vary slightly due to rounding.

1. Emissions for ROG, NOx, PM<sub>10</sub>, and PM<sub>2.5</sub> have accounted for the 2027 and 2028 Adjustment Factors.

Source: CalEEMod Output Sheets (see Attachment A) and Detailed Calculation Sheets (see Attachment B)

<sup>4</sup> SCAQMD. (March 2023). *South Coast AQMD Air Quality Significance Thresholds*. <https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25>

**Table 3: Regional Operation Emission Estimates**

Operational Activity	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NOx	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Mobile	8.41	6.85	60.91	0.15	13.74	3.56
Area	15.27	4.88	23.95	0.03	0.40	0.39
Energy	0.13	2.20	0.94	0.01	0.18	0.18
<b>Total Operational Emissions</b>	<b>23.81</b>	<b>13.93</b>	<b>85.80</b>	<b>0.19</b>	<b>14.32</b>	<b>4.13</b>
SCAQMD Significance Thresholds	55	55	550	150	150	55
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: ROG = reactive organic gases, NOx = nitrogen oxides, CO = carbon monoxide, SO<sub>2</sub> = sulfur dioxide, PM<sub>10</sub> = particulate matter 10 microns in diameter, PM<sub>2.5</sub> = particulate matter 2.5 microns in diameter

Source: CalEEMod Output Sheets (see Attachment A) and Detailed Calculation Sheets (see Attachment B)

### Local Emissions

Localized significance thresholds (LSTs) were also adopted by the SCAQMD due to project-related construction or operational air emissions having the potential to exceed the State and national air quality standards in the project vicinity, while not exceeding the regional emission significance thresholds adopted by the SCAQMD. These thresholds set the maximum rates of daily construction or operational emissions from a project site that would not exceed a national or State ambient air quality standard.<sup>5</sup> The differences between regional thresholds and LSTs are as follows:

1. Regional thresholds include all sources of project construction and operational emissions generated from on-site and off-site emission sources whereas the LSTs only consider the emissions generated from on-site emission sources.
2. LSTs only apply to carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), while regional thresholds include both reactive organic gases (ROG) and sulfur dioxide (SO<sub>2</sub>).
3. Regional thresholds apply to emission sources located anywhere within the SCAQMD whereas the LSTs are location dependent and rely on the size of the project and emission location relative to the nearest sensitive receptor.

SCAQMD provides screening tables (Appendix C of the SCAQMD 2008 *Final Localized Significance Threshold Methodology*) for projects that disturb less than or equal to 5 acres in a day.<sup>6</sup> These tables were created to easily determine if the daily emissions of NOx, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> from a project could result in a significant impact to the local air quality. The thresholds are determined by:

<sup>5</sup> SCAQMD. (2008). *Final Localized Significance Threshold Methodology*.

<http://www.aqmd.gov/docs/defaultsource/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf>

<sup>6</sup> SCAQMD. (2008). *Final Localized Significance Threshold Methodology Appendix C*. <http://www.aqmd.gov/docs/defaultsource/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2>

- Source receptor area (SRA), which is the geographic area within the SCAQMD that can act as both a source of emissions and a receptor of emission impacts (the Project is located within SRA 35, East San Bernadino Valley);
- Size of grading disturbance (construction)/size of the project (operation); and
- Distance to the nearest sensitive receptor, which is defined as an individual who is most susceptible to negative health effects when exposed to air pollutants, and includes children, the elderly, and adults with chronic health issues. Locations for such receptors include residences, schools, elderly care centers, and hospitals.

The site preparation and grading phases would result in approximately 3.5 and 4.0 acres of ground disturbance per day, respectively, as can be found in Attachment B, *Detailed Calculation Sheets*. Therefore, the maximum ground disturbance would occur during the grading phase with a maximum of 4.0 acres disturbed per day. Pursuant to SCAQMD guidance, which recommends selecting thresholds based on the smaller of the total site area or the daily disturbed area, construction emissions were evaluated by interpolating between the 2-acre and 5-acre disturbance thresholds to estimate thresholds for 4.0 acres.

The nearest sensitive receptor to the Project site is the residence located west of the Project site, at a distance of 4 meters (15 feet). The construction emission thresholds for 25 meters were used as an approximate distance and per the methodology suggested by the SCAQMD, since 25-meter thresholds are the minimum distance provided.

Table 4, *Localized Construction Emission Estimates*, shows the thresholds and estimated maximum daily construction emissions for the proposed Project. As shown in Table 4, the proposed Project would not exceed applicable thresholds and therefore would result in a less-than-significant localized construction air quality impact.

**Table 4: Localized Construction Emission Estimates**

Construction Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>2027 (Year 1)</b>				
Site Preparation	32.74	30.37	7.28	4.18
Grading	27.97	28.33	3.94	2.15
Building Construction and Paving	17.12	23.99	0.66	0.61
Building Construction	10.17	14.04	0.36	0.34
<b>Maximum On-site Emission (2027)</b>	<b>32.74</b>	<b>30.37</b>	<b>7.28</b>	<b>4.18</b>
<b>2028 (Year 2)</b>				
Building Construction	9.66	14.04	0.33	0.30
Building Construction and Architectural Coating	10.74	15.53	0.32	0.32
Architectural Coating	1.08	1.49	0.02	0.02
<b>Maximum On-site Emission (2028)</b>	<b>10.74</b>	<b>15.53</b>	<b>0.33</b>	<b>0.32</b>
<b>Maximum On-site Emissions (2027-2028)</b>	<b>32.74</b>	<b>30.37</b>	<b>7.28</b>	<b>4.18</b>
SCAQMD Screening Thresholds	236.7	1,774.7	11.7	7.7
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: NO<sub>x</sub> = nitrogen oxides, CO = carbon monoxide, PM<sub>10</sub> = particulate matter 10 microns in diameter, PM<sub>2.5</sub> = particulate matter 2.5 microns in diameter.

Source: CalEEMod Output Sheets (see Attachment A) and Detailed Calculation Sheets (see Attachment B)

According to the SCAQMD LST methodology, LSTs apply to a project's stationary and on-site mobile sources. Projects that involve mobile sources that spend long periods queuing and idling at a site, such as transfer facilities or warehousing and distribution buildings, have the potential to exceed the operational LSTs. The proposed Project would operate as a residential development, which does not typically involve diesel vehicles regularly idling or queuing for long periods. Therefore, due to the lack of significant stationary source emissions or idling diesel-powered vehicles, impacts related to operational LSTs are presumed to be less than significant.

#### **Air Quality Management Plan Consistency**

The SCAQMD's CEQA Handbook provides the following two criteria to determine whether a project would be consistent with the 2022 AQMP:

1. The Project would not generate population and employment growth that would be inconsistent with Southern California Association of Governments (SCAG)'s growth forecasts from the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); and
2. The Project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Consistency Criterion No. 1 refers to SCAG's growth forecasts and the associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's regional growth

projections, which rely in part on the general plans of jurisdictions within the SCAG region. The Project site has an existing General Plan Land Use Designation of Commercial (C) and is zoned as a Specific Plan Area. Implementation of the proposed Project would require a General Plan Amendment and Specific Plan Amendment and consists of the Pioneer Park Specific Plan (“Specific Plan”) and Tentative Tract Map (TTM) to allow for the development of the 282 residential units on-site. The proposed General Plan Amendment would amend the City’s General Plan Land Use Map by changing the existing land use designation of the Project site from Commercial (C) to Medium Density Residential (MDR). The Project site encompasses sites located within the East Valley Corridor Specific Plan (SP 40), which would be amended to remove the area from the existing East Valley Corridor Specific Plan in order to be placed into the proposed Pioneer Park Specific Plan.

As a residential development consisting of 275 single-family homes and seven multifamily dwelling units, the Project does not include employment-generating uses beyond what is anticipated under the City’s General Plan. Therefore, it would not induce substantial unplanned employee growth or exceed growth assumptions for the area. The population of Redlands in 2025 as recorded by the California Department of Finance is approximately 73,488 persons.<sup>7</sup> SCAG growth forecasts indicate an increase from 69,500 persons in 2016 to 80,800 persons in 2045.<sup>8</sup> Based on the average household size for the City of Redlands of 2.65 persons per household, the Project’s 275 single-family units and seven multifamily dwelling units would add approximately 748 residents.<sup>9</sup> This increase represents a negligible portion (0.7 percent increase) of the City’s projected population growth over the 2016–2045 period. Accordingly, the Project would be consistent with the growth assumptions used in the development of the 2020–2045 RTP/SCS and would not jeopardize attainment of the air quality levels identified in the AQMP, and thus satisfies Consistency Criterion No. 1.

Consistency Criterion No. 2 refers to the California Ambient Air Quality Standards. An impact would occur if emissions associated with the proposed Project exceed SCAQMD’s significance thresholds during construction or operation. As shown in Table 2 and Table 3, the Project’s construction and operational emissions would not exceed any applicable SCAQMD thresholds. Therefore, the Project would be consistent with Consistency Criterion No. 2.

As the Project would be consistent with both Consistency Criteria No. 1 and 2, impacts related to the Project’s consistency with the AQMP would be less than significant.

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<sup>7</sup> City of Redlands Population Estimate (73,488 persons as of January 1, 2025):

California Department of Finance. (May 2025). *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2025*. <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2025>

<sup>8</sup> SCAG Growth Forecasts (11,300 persons between 2016 and 2045):

Southern California Association of Governments (SCAG). (September 2020). *Demographics and Growth Forecast*. [/https://scag.ca.gov/sites/default/files/old/file-attachments/0903fconnectsocial\\_demographics-and-gro...](https://scag.ca.gov/sites/default/files/old/file-attachments/0903fconnectsocial_demographics-and-gro...)

<sup>9</sup> Average Household Size (2.65 service population for City of Redlands):

SCAG (April 2021). *Local Housing Data*. <https://scag.ca.gov/sites/default/files/old/file-attachments/redlands-he-0421.pdf?1620769718=>

## Odors

Odors would be produced during the construction of the proposed Project due to the operation of heavy-duty off-road equipment. The primary odor emitted would be diesel particulate matter (DPM) from the vendor trucks and heavy-duty off-road equipment. This odor may be noticeable by nearby residents; however, these odors would be expected and not necessarily objectionable. These odors would also dissipate quickly and would be temporary. Therefore, due to the nature of the odor produced during construction as temporary and non-objectionable to a substantial number of people, the odor impact from construction of the proposed Project would be less than significant.

For operational odor emissions, SCAQMD's *CEQA Air Quality Handbook* describes odor complaints associated with the following land uses:

- Agricultural uses
- Chemical plants
- Composting activities
- Dairies
- Fiberglass molding
- Food processing plants
- Landfills
- Refineries
- Wastewater treatment plants

The Project does not propose any of the above land uses and is required to comply with SCAQMD Rule 402, *Nuisance*, which states:

*A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.*

Thus, impacts associated with odor produced by operation of the proposed Project would be less than significant.

## Conclusion

The proposed Project's maximum daily regional and localized construction and operational emissions would not exceed SCAQMD's regional thresholds of significance, as detailed in Tables 2 through 4. All construction activities would comply with applicable SCAQMD rules and regulations, ensuring minimal and temporary odor exposure during construction. Operational impacts are also anticipated to be minimal and consistent with surrounding land uses.

In addition, the proposed Project is consistent with SCAQMD'S 2022 AQMP, reflecting adherence to regional air quality management goals and standards. During construction, any odors produced will be temporary and not significantly objectionable. Additionally, the proposed Project involves land uses that

do not typically generate significant odor complaints and would comply with SCAQMD Rule 402, which addresses potential odor impacts.

Overall, the proposed Project's impacts related to air quality would be less than significant.

## Energy

The CEQA Guidelines do not have specific numerical thresholds for energy consumption. Rather, the questions in Appendix G, (VI) Energy, ask: (a) “[Would the proposed Project] Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?” and (b) “[Would the project] Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?”<sup>10</sup> Therefore, for the purpose of this analysis, a significant impact would occur if:

- a) The project design and/or location encourages wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, as well as the use of fuel by vehicles anticipated to travel to and from the project; or
- b) The project design impedes the growth of future renewable energy developments.

Southern California Edison and the Southern California Gas Company would provide electricity and natural gas, respectively, for construction and operation of the proposed Project. The following tools were used to calculate the energy (electricity, natural gas, and petroleum) consumption of the proposed Project:

- Construction equipment fuel consumption was derived from the CARB OffRoad2021 emission model.
- Fuel consumption from vehicle travel was derived from the CARB EMFAC2021 emission model.
- Electrical and natural gas usage was derived from CalEEMod (Version 2022.1).
- Electricity consumption was derived from CalEEMod (Version 2022.1).

The latest version of EMFAC was released in May 2025 (EMFAC2025). However, as EMFAC2021 is incorporated into CalEEMod Version 2022.1 and EMFAC2025 has not yet received USEPA approval for conformity purposes and remains a preliminary model, EMFAC2021 is utilized for this analysis as it represents the most recent USEPA-approved emissions model available for use within CalEEMod at the time of analysis.

### Electricity and Natural Gas Usage

Due to the Project size and the fact that construction is temporary, the electricity used during construction of the proposed Project would be substantially less than that required for Project operation and would have a negligible contribution to the Project’s overall energy consumption. The electric power used would be for as-necessary lighting and electronic equipment such as computers inside temporary construction trailers. Natural gas is not anticipated to be needed for construction activities. Any natural gas consumption during construction would be minor and negligible in comparison with countywide consumption.

### Petroleum Fuel Usage

Construction equipment associated with construction activities (off-road/heavy duty vehicles) would rely on diesel fuel, as would vendor and haul trucks involved in delivering building materials and removing

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<sup>10</sup> California Energy Commission. (2023). *CEQA Statutes and Guidelines Attachment 10 Appendix G: Environmental Checklist Form*. [https://www.energy.ca.gov/sites/default/files/2024-01/11\\_Attachment\\_10\\_-\\_Appendix\\_G\\_from\\_CEQA\\_Handbook\\_ada.docx](https://www.energy.ca.gov/sites/default/files/2024-01/11_Attachment_10_-_Appendix_G_from_CEQA_Handbook_ada.docx)

demolition debris from the Project site. Construction workers would travel to and from the Project site throughout the duration of construction, and for a conservative analysis, it is assumed that construction workers would travel in gasoline-powered passenger vehicles. The proposed Project's construction vehicle fuel usage is based on vehicle miles traveled (VMT) and fuel usage factors contained in the CARB EMFAC2021 model, which are included in Attachment B, *Detailed Calculation Sheets*. The trips included are those of worker vehicles, vendor vehicles, and haul vehicles. Construction equipment would be transported to the site and operated on-site only. Please refer to Attachment B for the total fuel consumption and horsepower-hour data contained within the CARB Off-Road 2021 emission model for specific types of diesel construction equipment.

As shown in Table 5, *Total Construction Fuel Usage*, construction of the proposed Project would require a total of 99,593 gallons of diesel fuel and 78,497 gallons of gasoline fuel from construction vehicles. As shown in Table 5, this would result in a 0.01 percent increase in countywide construction diesel fuel consumption, a 0.01 percent increase in countywide on-road gasoline consumption, and a 0.31 percent increase in countywide off-road diesel consumption. Thus, increased energy consumption from the construction of the proposed Project would be nominal. Additionally, it should be noted that this total fuel consumption is a conservative analysis and would likely overstate the amount of fuel used, as specific construction equipment (e.g., crane) is not expected to operate for the entire duration of construction.

**Table 5: Total Construction Fuel Usage**

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
On-Road Construction Vehicles	39,329	78,497
Off-Road Construction Equipment	60,264	-
<b>Total</b>	<b>99,593</b>	<b>78,497</b>
On-Road Countywide	264,229,526	664,752,209
Off-Road Countywide	19,277,838	463,498
<b>On-Road Percentage</b>	<b>0.01%</b>	<b>0.01%</b>
<b>Off-Road Percentage</b>	<b>0.31%</b>	-

Source: CalEEMod Output Sheets (see Attachment A) and Detailed Calculation Sheets (see Attachment B)

## Operation

Operation of the proposed Project would consume electricity, natural gas, and gasoline. Electricity consumption for the proposed Project can be found in Attachment A, *CalEEMod Output Sheets*. The gasoline consumption rates utilize the same assumptions that were used for construction worker vehicles. The Project's estimated energy consumption is shown in Table 6, *Project Annual Operational Energy Consumption*, below. The proposed Project is expected to require consumption of electricity, natural gas, and gasoline. However, the proposed Project's energy consumption would be consistent with similar sized projects and would not constitute an inefficient use of energy. As shown in Table 6, operation of the proposed Project would result in a countywide electricity increase of 0.01 percent and a countywide natural gas increase of 0.02 percent within San Bernardino County. The on-road fuel consumption from the Project would result in a 0.04 percent increase in countywide gasoline consumption. Thus, the Project's operational energy consumption would be nominal at the countywide scale.

**Table 6: Project Annual Operational Energy Consumption**

Proposed Project Energy Usage	San Bernardino Countywide Energy Consumption	Percentage Increase in Countywide Consumption from Proposed Project
<b>Electricity (Kilowatt-Hour)</b>		
1,145,554	16,286,000,000	0.01%
<b>Natural Gas (Thousands British Thermal Units)</b>		
8,604,672	45309168520	0.02%
<b>Petroleum (Gallons of Gasoline Fuel)</b>		
279,444	664,752,209	0.04%

Source: CalEEMod Output Sheets (see Attachment A) and Detailed Calculation Sheets (see Attachment B)

### Future Renewable Energy Developments

The proposed Project would be required to meet the CCR Title 24 State Building Energy Efficiency Standards, appliance efficiency regulations, and green building standards in effect during permitting. The City's administration of energy efficiency requirements includes review of design components and energy conservation measures during the permitting process to ensure compliance with all standards. In addition, the Project buildings would comply with current Title 24 requirements, which require rooftop solar installation for single-family residences. As such, the Project would not inhibit the use of, and would allow for future flexibility related to, renewable energy.

### Conclusion

As described above, the Project would not result in significant impacts related to energy. Construction activities associated with the proposed Project are not expected to result in fuel demand, on a per-unit-of-development basis, that exceeds that of comparable residential projects in Southern California. The Project does not include any unusual characteristics that would require the use of construction equipment with lower energy efficiency than that used for typical residential development. In addition, construction activities would comply with applicable regulations aimed at reducing energy consumption and emissions, including restrictions on vehicle idling, fuel standards, and equipment efficiency requirements, and estimated energy consumption from construction of the Project would be nominal compared to the energy consumption of the region.

During operation, the Project would consume less electricity and natural gas but would consume more gasoline than the site's previous use. However, operational energy demand would be consistent with that of similar residential developments and would not result in inefficient, wasteful, or unnecessary energy consumption, and energy consumption from the operation of the Project would be nominal compared to that of the region. Therefore, the Project would result in a less-than-significant energy impact during both construction and operation, and no mitigation would be required.

In addition, the operation of the Project would be similar to other residential projects within the City and would be required to meet Title 24 energy efficiency standards and comply with all applicable City energy codes. The Project buildings would also be solar-ready in compliance with current Title 24 requirements. Therefore, the Project would not inhibit the use of, and would allow for future flexibility relating to, renewable energy.

Overall, the Project would result in less-than-significant impacts related to wasteful, inefficient, and unnecessary consumption of energy and impediment of future renewable energy development.

## Greenhouse Gas Emissions

### Regulatory Background and Thresholds

California State Executive Order S-3-05, issued by Governor Arnold Schwarzenegger in June 2005, established comprehensive GHG reduction targets for the State.<sup>11</sup> It mandated reducing GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. This Executive Order laid the foundation for subsequent climate change mitigation efforts in California, including the development of various policies and programs aimed at reducing emissions across sectors such as transportation, energy, and industry. The objective of the Executive Order is to contribute to capping worldwide CO<sub>2</sub> concentrations at 450 parts-per-million (ppm), stabilizing global climate change.

The City adopted the Redlands Climate Action Plan (CAP) and General Plan 2035 in 2017. The CAP's GHG emission targets and goals are based on meeting the goals in Executive Order B-30 15 and SB 32 and following the CAP guidelines established in CARB's 2022 Scoping Plan. The CAP includes emissions targets of 6.0 MTCO<sub>2</sub>e per capita (service population) per year for 2030 and 5.0 MTCO<sub>2</sub>e per capita per year for 2035. Redlands' emissions targets are met in both years 2030 and 2035, with forecasted emissions of 4.8 MTCO<sub>2</sub>e in 2030 and 4.5 MTCO<sub>2</sub>e in 2035. Therefore, implementation of the Redlands General Plan 2035 would enable Redlands to meet the standards outlined in the 2022 Scoping Plan, and implementation of projects consistent with the General Plan would be consistent with the Redlands CAP and therefore would not require additional GHG analysis in accordance with CEQA.

### Project GHG Emissions

The Project's construction GHG emissions are shown in Table 7, *Project Construction GHG Emissions*, and the overall construction and operational emissions are shown in Table 8, *Total Project GHG Emissions*, below. These emissions were calculated using the CalEEMod model. The construction emissions are amortized over 30 years and added to the operational GHG emissions. As shown in Table 8, the Project's construction and operational GHG emissions would total 3,318 MTCO<sub>2</sub>e per year, equating to 4.44 MTCO<sub>2</sub>e per service population per year, which is below the City of Redlands CAP Year 2030 target of 6.0 MTCO<sub>2</sub>e per service population per year. Therefore, the Project would result in a less-than-significant impact on GHG emissions.

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<sup>11</sup> Executive Department State of California Executive Order S-3-05: <https://www.library.ca.gov/wp-content/uploads/GovernmentPublications/executive-order-proclamation/5129-5130.pdf>

**Table 7: Project Construction GHG Emissions**

Activity	Annual GHG Emissions (MTCO <sub>2e</sub> )
2027	735
2028	483
<b>Total Emissions</b>	<b>1,217</b>
Total Emissions Amortized Over 30 Years	41

Note: Numbers have been rounded.

Source: CalEEMod Output Sheets (see Attachment A) and Detailed Calculation Sheets (see Attachment B)

**Table 8: Total Project GHG Emissions**

Activity	Annual GHG Emissions (MTCO <sub>2e</sub> )
Mobile	2,458
Area	75
Energy	645
Water	31
Waste	68
Refrigeration	1
<b>Total Project Operation Emissions</b>	<b>3,277</b>
Amortized Construction Emissions	41
<b>Total Project Emissions</b>	<b>3,318</b>
Service Population	748
Emissions per Service Population per Year	4.44
City of Redlands CAP YEAR 2030 Service Population Threshold Per Capita Per Year	6.0
<b>Threshold Exceeded?</b>	<b>No</b>

Note: Numbers have been rounded.

Source: CalEEMod Output Sheets (see Attachment A) and Detailed Calculation Sheets (see Attachment B)

**Greenhouse Gas Reduction Plans Consistency**

The Project would comply with applicable plans, policies, and programs outlined in the City of Redlands General Plan and CAP, which incorporate the goals and reduction strategies of the 2022 California Air Resources Board (CARB) Scoping Plan and align with the Southern California Association of Governments (SCAG) Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Consistent with current State and regional guidance, the Project’s consistency is evaluated in the context of the 2022 CARB Scoping Plan, SCAG Connect SoCal 2024, the City of Redlands General Plan, and the City of Redlands CAP. The Project’s consistency with these plans is described below.

Additionally, based on project-specific GHG emissions modeling, the proposed Project would generate approximately 3,318 metric tons of MTCO<sub>2e</sub> per year, as shown in Table 8, equating to 4.44 MTCO<sub>2e</sub> per

service population per year, which is below the City of Redlands Climate Action Plan (CAP) Year 2030 target of 6.0 MTCO<sub>2</sub>e per service population per year. Thus, the Project would be in line with the GHG reduction goals of the City's CAP.

Based on this analysis, the Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and would result in a less-than-significant impact.

### **State and Regional Guidance**

#### *2022 CARB Scoping Plan*

The 2022 CARB Scoping Plan Update establishes the GHG emissions reduction target for 2045 at 85 percent below 1990 levels, as codified by SB 32. Table 9, *2022 Scoping Plan Consistency Summary*, shows consistency with CARB's 2022 Scoping Plan. As seen in Table 9, the Project would not conflict with the 2022 Scoping Plan.

**Table 9: 2022 Scoping Plan Consistency Summary**

Action	Consistency
<b>GHG Emissions Reductions Relative to the SB 32 Target</b>	
40% Below 1990 levels by 2030.	<b>Consistent.</b> The Project would comply with Title 24 Part 6 energy requirements as well as Title 24 Part 11 building standards, along with other local and State initiatives that aim to achieve the 40% below 1990 levels by 2030 goal.
<b>Smart Growth/Vehicle Miles Traveled VMT</b>	
VMT per capita reduced 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045.	<b>Consistent.</b> The proposed Project includes the installation of sidewalks along the Project’s frontage on Tennessee Street and W. San Bernardino Avenue and the addition of a bus stop (provided by Omnitrans) to the south of the Project site to encourage alternative modes of transportation. The Project is consistent with the growth and land use assumptions in the Southern California Association of Governments’ 2022 Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy, so the Project would not interfere with the analysis completed for the Connect SoCal report outlining VMT reduction targets and measures.
<b>Light-Duty Vehicle (LDV) Zero-Emission Vehicles (ZEVs)</b>	
100% of LDV sales are ZEV by 2035.	<b>Consistent.</b> The proposed Project would comply with Title 24 Part 6 by providing electrical wiring in garages to allow for the future installation of electric vehicle chargers.
<b>New Residential and Commercial Buildings</b>	
All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030.	<b>Consistent.</b> The proposed Project would comply with the Title 24 Part 6 building energy requirements, which would require all in-unit appliances for residential projects to be Energy Star certified.
<b>Construction Equipment</b>	
25% of energy demand electrified by 2030 and 75% electrified by 2045.	<b>Consistent.</b> The proposed Project would be required to use construction equipment that is registered by CARB and meets CARB’s standards. CARB sets its standards to be in line with the goal of reducing energy demand by 25% in 2030 and 75% in 2045.

Source: California Air Resources Board. (2022). *2022 Scoping Plan for Achieving Carbon Neutrality*. Table 2-1: Actions for the Scoping Plan Scenario: AB 32 GHG Inventory Sectors.

### *SCAG Connect SoCal 2024*

On April 4, 2024, the SCAG Regional Council adopted Connect SoCal 2024, the 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Connect SoCal 2024 establishes long-range regional transportation goals, transportation improvement programs, regional housing needs allocations, and related strategies to integrate land use and transportation planning throughout the SCAG region. A key objective of the RTP/SCS is to reduce per capita GHG emissions from passenger vehicle travel in accordance with State targets.

The Project site is located within the SCAG region and is therefore subject to the regional planning framework established by Connect SoCal 2024. As a residential development consisting of 275 single-family homes and seven multifamily dwelling units, the Project would not generate population or employment growth beyond what is anticipated in the City of Redlands General Plan and associated regional growth forecasts. The Project requires a General Plan Amendment (GPA) and Specific Plan Amendment (SPA) to allow the proposed residential uses; however, the development would occur within the City and would not alter regional transportation patterns or infrastructure planning assumptions.

Although SCAG policies are implemented primarily at the regional and local jurisdiction levels rather than at the individual project level, the proposed Project would not interfere with the implementation of Connect SoCal 2024 strategies. The Project would comply with applicable State building energy efficiency standards (Title 24) and would support regional objectives related to coordinated land use and transportation planning. Accordingly, the Project is consistent with Connect SoCal 2024 and would not conflict with SCAG's regional growth, transportation, or GHG reduction framework.

### **Local Planning and Climate Action Guidance**

#### *City of Redlands General Plan Update*

The City of Redlands General Plan 2035 Final Environmental Impact Report (FEIR) states that implementation of the General Plan would generate new GHG emissions, directly and indirectly.<sup>12</sup> However, General Plan policies would help Redlands achieve the goals of SCAG's RTP/SCS, which would contribute to the achievement of SCAG's GHG emissions reductions goals per capita required by California State Senate Bill (SB) 375. Therefore, the General Plan FEIR concluded that there would be no impacts related to GHG emissions, and no mitigation measures were required or identified. While no significant GHG-related impacts have been identified in relation to adoption and implementation of the General Plan, the General Plan includes policies that will further reduce the GHG emissions from individual development projects that take place through 2035. General Plan policies that focus on GHG emissions reductions include:

- Redlands General Plan Policy 8-P.9: Undertake initiatives to enhance sustainability by reducing the community's GHG emissions.
- Redlands General Plan Policy 8-P.10: Demonstrate leadership by reducing the use of energy and fossil fuel consumption in municipal operations, including transportation, waste reduction, and recycling, and by promoting efficient building design and use.

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<sup>12</sup> City of Redlands. (2017). *City of Redlands General Plan Final EIR*.

Table 10, *City of Redlands General Plan Consistency Summary*, summarizes how the Project is consistent with these and other applicable General Plan policies.

**Table 10: City of Redlands General Plan Consistency Summary**

Goals, Policies, and Actions	Consistency
<p><b>8-A.1</b> Work with Southern California Edison Company (SCE) and Southern California Gas Company (SCG) to educate the public about the need to conserve energy resources and the higher energy efficiency of new appliances and building materials.</p>	<p><b>Consistent.</b> The Project would not impede this action. The Project incorporates high-efficiency, all-electric appliances and complies with Title 24 Part 6 and Part 11 energy standards, supporting energy conservation goals. By aligning with these building standards, the Project indirectly reinforces the City’s efforts to educate the public on energy-efficient technologies and sustainable building practices.</p>
<p><b>8-A.2</b> Support San Bernardino County and San Bernardino Associated Governments (SANBAG) in implementation of their energy-related policies.</p>	<p><b>Consistent.</b> The Project would not impede this action. All Project development activities, including design, construction, and operation, adhere to State energy codes and regional sustainability requirements. The Project is compatible with County and SANBAG energy-related policies, contributing to overall regional energy conservation and GHG reduction strategies.</p>
<p><b>8-A.3</b> Leverage and help drive community participation in utility company programs and financial incentives within the City (e.g., one stop information clearinghouse, incentives, on bill financing, etc.).</p>	<p><b>Consistent.</b> The Project would not impede this action. While primarily a private residential development, the Project supports the City’s objectives by integrating energy-efficient measures and infrastructure that align with available utility programs and incentives, such as electrical wiring for future EV chargers and energy-efficient appliances, encouraging residents to participate in utility programs and adopt energy-saving practices.</p>
<p><b>8-A.5</b> Accelerate the adoption of solar power and/or other alternative energy usage in Redlands through actions such as: Establishing incremental growth goals for solar power/alternative energy systems in Redlands; Developing guidelines, recommendations, and examples for cost-effective solar and/or other alternative energy-based installation; and Installing solar/alternative energy technology on available City spaces.</p>	<p><b>Consistent.</b> The Project would not impede this action. The Project is designed to comply with current Title 24 standards and CALGreen Code requirements, which facilitate energy-efficient design and support renewable energy integration. Opportunities for future installation of solar or other alternative energy systems can be accommodated on private residences, contributing to the City’s incremental adoption of renewable energy technologies and supporting long-term sustainability goals.</p>
<p><b>8-A.6</b> Complete a cost-benefit analysis for new City energy conservation or renewable energy projects that reviews the costs and benefits of a project over its life cycle to ensure the highest and best use of available funds.</p>	<p><b>Consistent.</b> The Project would not impede this action. The Project is designed to meet energy efficiency standards under Title 24 Part 6 and Part 11, which ensures long-term operational cost savings. By using energy-efficient systems and all-electric appliances, the Project aligns with the City’s goal of optimizing energy investments and supports the overall efficiency of City and community energy programs.</p>

Goals, Policies, and Actions	Consistency
<p><b>8-A.7</b> Seek alternatives to reduce non-renewable energy consumption attributable to transportation within the Planning Area. Seek funding and other assistance from the South Coast Air Quality Management District (AQMD) for installation of electric vehicle charging stations at appropriate locations throughout the city.</p>	<p><b>Consistent.</b> The Project incorporates measures to reduce transportation-related non-renewable energy consumption, including the installation of sidewalks along the Project frontage and a proposed Omnitrans bus stop to encourage alternative transportation modes. Additionally, the Project includes electrical wiring in garages for potential future electric vehicle charging infrastructure, which supports the City’s initiatives for EV adoption and aligns with regional programs such as AQMD funding opportunities.</p>
<p><b>8-A.8</b> Implement and enforce California Code of Regulations Title 24 building standards (parts 6 and 11) to improve energy efficiency in new or substantially remodeled.</p>	<p><b>Consistent.</b> The Project is designed and constructed in full compliance with Title 24 Part 6 and Part 11 standards. All residential units include Energy Star certified appliances, and the Project incorporates energy-efficient building materials and systems. This ensures the Project contributes to the City’s objectives for energy efficiency and reduced GHG emissions.</p>
<p><b>Policy 8-P.9</b> Undertake initiatives to enhance sustainability by reducing the community’s GHG emissions.</p>	<p><b>Consistent.</b> The Project incorporates multiple sustainability measures, including all-electric appliances, energy-efficient building design, and infrastructure to support alternative transportation. By maintaining Project GHG emissions below the City’s CAP thresholds (4.44 MTCO<sub>2</sub>e per service population per year vs. 6.0 MTCO<sub>2</sub>e CAP target), the Project contributes to the reduction of community-wide emissions and aligns with the City’s sustainability initiatives.</p>
<p><b>Policy 8-P.10</b> Demonstrate leadership by reducing the use of energy and fossil fuel consumption in municipal operations, including transportation, waste reduction, and recycling, and by promoting efficient building design and use.</p>	<p><b>Consistent.</b> The Project demonstrates alignment with this policy through energy-efficient design, and potential support for EV charging. While the Project is a private residential development, its adherence to energy and efficiency standards supports municipal goals by reducing fossil fuel consumption indirectly and promoting energy-conscious building practices in the community.</p>

Source: City of Redlands. (2017). *City of Redlands General Plan*.

*City of Redlands Climate Action Plan*

As mentioned previously, the City of Redlands adopted its CAP in December 2017 to establish a framework for reducing GHG emissions communitywide through 2035. The CAP contains GHG reduction policies across transportation, land use, energy use, water management, and waste reduction and recycling.

The CAP was developed to align with statewide GHG reduction targets, including those established in the 2022 CARB Scoping Plan, which sets sector-specific strategies necessary to achieve carbon neutrality by 2045. By incorporating the objectives of the CARB Scoping Plan, the CAP supports reductions in building energy, transportation, waste, and land use, and promotes implementation of mandatory measures in

effect at the time of construction and operation, including compliance with the California Building Standards Code (Title 24), which incorporates the California Energy Code (Part 6) and CALGreen Code (Part 11).

Table 11, *City of Redlands CAP Consistency Summary*, presents the Project's consistency with applicable City of Redlands CAP policies related to GHG emissions reduction and sustainability.

**Table 11: City of Redlands CAP Consistency Summary**

Policies	Consistency
<p><b>Policy 8-A.45</b> Prepare a Climate Action Plan to ensure that the Planning Area complies with State-mandated GHG emissions</p>	<p><b>Consistent.</b> The Project's construction and operational GHG emissions are projected at 3,318 MTCO<sub>2</sub>e per year, which equates to 4.44 MTCO<sub>2</sub>e per service population per year based on an average household size of 2.65 persons per household. This is below the City of Redlands CAP 2030 threshold of 6.0 MTCO<sub>2</sub>e per service population per year. By remaining below the CAP threshold, the Project aligns with the City's commitment to comply with State-mandated GHG emission reduction requirements and demonstrates adherence to the framework established in the Climate Action Plan.</p>
<p><b>Policy 8-A.46</b> Continue to monitor the City's compliance with State-mandated GHG emissions, as provided for in the Climate Action Plan. Make timely adjustments to City policies as required to continue meeting State GHG targets, and as changes in technology, federal and State programs, or other circumstances warrant.</p>	<p><b>Consistent.</b> The Project's emissions are below the Redlands CAP threshold and therefore would not interfere with ongoing monitoring of the City's compliance with State-mandated GHG targets. Additionally, the Project incorporates current technologies and standards, including Energy Star appliances, Title 24 compliance, and energy-efficient building measures. These features ensure that the Project remains aligned with evolving State and City GHG programs and can accommodate future policy updates without contributing to exceedances.</p>
<p><b>Policy 8-A.47</b> Demonstrate City leadership by giving preference to or providing incentives for climate friendly purchasing.</p>	<p><b>Consistent.</b> The Project does not impede City-led climate-friendly purchasing programs and supports local sustainability goals by implementing energy-efficient appliances, adherence to Title 24 Part 6 energy requirements, and potential infrastructure for electric vehicle charging. While the Project is a private residential development, its design and construction practices are consistent with the City's objectives for energy efficiency and reduced carbon footprint, supporting broader CAP goals.</p>
<p><b>Policy 8-A.48</b> Support a regional approach to study the feasibility of establishing Community Choice Aggregation (CCA) or another program that increases the renewable energy supply and maintains the reliability and sustainability of the electrical grid.</p>	<p><b>Consistent.</b> The Project is compatible with regional renewable energy initiatives such as Community Choice Aggregation by providing infrastructure for future integration of electric vehicle charging and Energy Star appliances. By complying with local building standards and energy codes, the Project does not impede the development or operation of regional renewable</p>

Policies	Consistency
	energy programs and contributes to the City’s overall strategy for grid sustainability and increased renewable energy utilization.

Source: City of Redlands. (2017). *City of Redlands General Plan*.

**Conclusion**

The construction and operational GHG emissions of the proposed Project would total 3,318 MTCO<sub>2</sub>e/year. Based on an average household size of 2.65 persons per household for the City of Redlands, the Project would result in a direct population increase of approximately 748 persons. This equates to 4.44 MTCO<sub>2</sub>e per service population per year, which is below the CAP Year 2030 target of 6.0 MTCO<sub>2</sub>e per service population per year.

Additionally, as shown in Tables 9, 10, and 11, the Project is consistent with the City of Redlands General Plan and CAP, which incorporate the 2022 CARB Scoping Plan and align with the SCAG Connect SoCal 2024 RTP/SCS. The Project would implement applicable GHG reduction measures and would not interfere with plans, policies, or regulations adopted to reduce GHG emissions. Overall, GHG impacts would be less than significant.

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ATTACHMENT A – CALEEMOD OUTPUT SHEETS

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# 25-124 Pioneer Park Specific Plan 2-26 Detailed Report

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5.10.1. Hearths

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

### 5.16.2. Process Boilers

## 5.17. User Defined

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

#### 5.18.1.2. Mitigated

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

#### 5.18.1.2. Mitigated

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

#### 5.18.2.2. Mitigated

## 6. Climate Risk Detailed Report

### 6.1. Climate Risk Summary

### 6.2. Initial Climate Risk Scores

### 6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

8.1. Justifications

8.3. Land Use

8.4. Construction

8.4.1. Construction Phases

8.4.2. Off-Road Equipment

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

8.5.2. Area Sources

### 8.5.2.1. Hearths

# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	25-124 Pioneer Park Specific Plan 2-26
Construction Start Date	3/1/2027
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50000
Precipitation (days)	24.0000
Location	34.079521362276196, -117.19777378839828
County	San Bernardino-South Coast
City	Redlands
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5398
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.38

## 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
Single Family Housing	275.000	Dwelling Unit	23.9000	536,250	102,671	—	729.000	—

Apartments Low Rise	7.00000	Dwelling Unit	0.37000	7,420.00	1,612.00	—	19.0000	—
Parking Lot	214.000	Space	1.93000	0.00000	0.00000	—	—	—
City Park	1.65000	Acre	1.65000	0.00000	0.00000	0.00000	—	WQ Basins
Other Asphalt Surfaces	4.33000	Acre	4.33000	0.00000	18,861.5	—	—	ROW construction
Other Asphalt Surfaces	3.13000	Acre	3.13000	136,343	13,634.3	—	—	—

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

Sector	#	Measure Title
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	65.9495	34.2533	36.7023	0.07085	8.91039	4.49852	8,349.99
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	64.2022	34.3227	32.0823	0.05974	8.91039	4.49852	7,081.69
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	10.4426	12.9989	17.4960	0.03150	2.56850	1.12507	4,436.54
Annual (Max)	—	—	—	—	—	—	—
Unmit.	1.90578	2.37230	3.19302	0.00575	0.46875	0.20532	734.520
Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	75.0000	100.0000	550.000	150.000	150.000	55.0000	—
Unmit.	No	No	No	No	No	No	—

Exceeds (Average Daily)	—	—	—	—	—	—	—
Threshold	75.0000	100.0000	550.000	150.000	150.000	55.0000	—
Unmit.	No	No	No	No	No	No	—

## 2.2. Construction Emissions by Year

### 2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2027	3.73734	34.2533	36.7023	0.07085	8.91039	4.49852	8,349.99
2028	65.9495	12.9825	28.4099	0.03966	3.34889	1.04733	7,023.38
Daily - Winter (Max)	—	—	—	—	—	—	—
2027	3.73147	34.3227	32.0823	0.05974	8.91039	4.49852	7,081.69
2028	64.2022	11.8700	22.4459	0.03735	2.90673	0.92966	6,225.99
Average Daily	—	—	—	—	—	—	—
2027	1.65170	12.9989	17.4960	0.03150	2.56850	1.12507	4,436.54
2028	10.4426	5.57655	10.8156	0.01723	1.36232	0.43341	2,916.11
Annual	—	—	—	—	—	—	—
2027	0.30144	2.37230	3.19302	0.00575	0.46875	0.20532	734.520
2028	1.90578	1.01772	1.97384	0.00314	0.24862	0.07910	482.796

### 2.2.2. Onsite Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2027	3.64578	32.7450	30.3726	0.06201	8.31782	4.33329	6,738.58

2028	65.1530	10.7378	15.5268	0.02785	0.34609	0.31840	2,817.80
Daily - Winter (Max)	—	—	—	—	—	—	—
2027	3.64578	32.7450	30.3726	0.05106	8.31782	4.33329	5,551.71
2028	64.0820	9.66028	14.0357	0.02555	0.32561	0.29956	2,639.17
Average Daily	—	—	—	—	—	—	—
2027	1.37805	11.7143	13.4565	0.02509	1.45681	0.84490	2,676.16
2028	10.1403	4.52934	6.56961	0.01190	0.15028	0.13826	1,219.97
Annual	—	—	—	—	—	—	—
2027	0.25149	2.13787	2.45582	0.00458	0.26587	0.15419	443.069
2028	1.85061	0.82660	1.19895	0.00217	0.02743	0.02523	201.980

2.2.3. Offsite Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2027	0.75947	2.26007	12.7123	0.01180	2.77719	0.68785	4,056.28
2028	0.79649	2.24472	12.8830	0.01180	3.00280	0.72893	4,205.57
Daily - Winter (Max)	—	—	—	—	—	—	—
2027	0.65265	2.36156	9.05241	0.01180	2.58112	0.64190	3,660.79
2028	0.63131	2.20973	8.41011	0.01180	2.58112	0.63009	3,586.82
Average Daily	—	—	—	—	—	—	—
2027	0.27366	1.28459	4.03945	0.00641	1.11168	0.28017	1,760.38
2028	0.30231	1.04721	4.24597	0.00534	1.21204	0.29515	1,696.15
Annual	—	—	—	—	—	—	—
2027	0.04994	0.23444	0.73720	0.00117	0.20288	0.05113	291.451
2028	0.05517	0.19112	0.77489	0.00097	0.22120	0.05387	280.816

2.2.4. Total Construction Emissions by Year, Mitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2027	3.73734	34.2533	36.7023	0.07085	8.91039	4.49852	8,349.99
2028	65.9495	12.9825	28.4099	0.03966	3.34889	1.04733	7,023.38
Daily - Winter (Max)	—	—	—	—	—	—	—
2027	3.73147	34.3227	32.0823	0.05974	8.91039	4.49852	7,081.69
2028	64.2022	11.8700	22.4459	0.03735	2.90673	0.92966	6,225.99
Average Daily	—	—	—	—	—	—	—
2027	1.65170	12.9989	17.4960	0.03150	2.56850	1.12507	4,436.54
2028	10.4426	5.57655	10.8156	0.01723	1.36232	0.43341	2,916.11
Annual	—	—	—	—	—	—	—
2027	0.30144	2.37230	3.19302	0.00575	0.46875	0.20532	734.520
2028	1.90578	1.01772	1.97384	0.00314	0.24862	0.07910	482.796

### 2.2.5. Onsite Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2027	3.64578	32.7450	30.3726	0.06201	8.31782	4.33329	6,738.58
2028	65.1530	10.7378	15.5268	0.02785	0.34609	0.31840	2,817.80
Daily - Winter (Max)	—	—	—	—	—	—	—
2027	3.64578	32.7450	30.3726	0.05106	8.31782	4.33329	5,551.71
2028	64.0820	9.66028	14.0357	0.02555	0.32561	0.29956	2,639.17
Average Daily	—	—	—	—	—	—	—
2027	1.37805	11.7143	13.4565	0.02509	1.45681	0.84490	2,676.16
2028	10.1403	4.52934	6.56961	0.01190	0.15028	0.13826	1,219.97
Annual	—	—	—	—	—	—	—

2027	0.25149	2.13787	2.45582	0.00458	0.26587	0.15419	443.069
2028	1.85061	0.82660	1.19895	0.00217	0.02743	0.02523	201.980

2.2.6. Offsite Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2027	0.75947	2.26007	12.7123	0.01180	2.77719	0.68785	4,056.28
2028	0.79649	2.24472	12.8830	0.01180	3.00280	0.72893	4,205.57
Daily - Winter (Max)	—	—	—	—	—	—	—
2027	0.65265	2.36156	9.05241	0.01180	2.58112	0.64190	3,660.79
2028	0.63131	2.20973	8.41011	0.01180	2.58112	0.63009	3,586.82
Average Daily	—	—	—	—	—	—	—
2027	0.27366	1.28459	4.03945	0.00641	1.11168	0.28017	1,760.38
2028	0.30231	1.04721	4.24597	0.00534	1.21204	0.29515	1,696.15
Annual	—	—	—	—	—	—	—
2027	0.04994	0.23444	0.73720	0.00117	0.20288	0.05113	291.451
2028	0.05517	0.19112	0.77489	0.00097	0.22120	0.05387	280.816

2.3. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	23.8080	13.4694	85.7898	0.19659	14.3146	4.12652	27,373.4
Mit.	23.8080	13.4694	85.7898	0.19659	14.3146	4.12652	26,368.3
% Reduced	—	—	—	—	—	—	4%
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	20.8771	13.7253	55.1008	0.18607	14.2966	4.11301	26,313.2

Mit.	20.8771	13.7253	55.1008	0.18607	14.2966	4.11301	25,308.1
% Reduced	—	—	—	—	—	—	4%
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	22.0719	9.51269	69.3493	0.15862	13.5754	3.67311	20,799.6
Mit.	22.0719	9.51269	69.3493	0.15862	13.5754	3.67311	19,794.5
% Reduced	—	—	—	—	—	—	5%
Annual (Max)	—	—	—	—	—	—	—
Unmit.	4.02812	1.73607	12.6562	0.02895	2.47751	0.67034	3,443.61
Mit.	4.02812	1.73607	12.6562	0.02895	2.47751	0.67034	3,277.21
% Reduced	—	—	—	—	—	—	5%
Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	55.0000	55.0000	550.000	150.000	150.000	55.0000	—
Unmit.	No	No	No	No	No	No	—
Mit.	No	No	No	No	No	No	—
Exceeds (Average Daily)	—	—	—	—	—	—	—
Threshold	55.0000	55.0000	550.000	150.000	150.000	55.0000	—
Unmit.	No	No	No	No	No	No	—
Mit.	No	No	No	No	No	No	—
Exceeds (Annual)	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	3,000.00
Unmit.	—	—	—	—	—	—	Yes
Mit.	—	—	—	—	—	—	Yes

## 2.4. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

Mobile	8.40690	6.38812	60.9055	0.15163	13.7403	3.55667	15,861.9
Area	15.2723	4.87928	23.9473	0.03091	0.39624	0.39182	6,011.29
Energy	0.12884	2.20199	0.93702	0.01406	0.17803	0.17803	4,900.74
Water	—	—	—	—	—	—	185.953
Waste	—	—	—	—	—	—	409.607
Refrig.	—	—	—	—	—	—	3.89377
Total	23.8080	13.4694	85.7898	0.19659	14.3146	4.12652	27,373.4
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	7.84442	6.84545	52.1732	0.14215	13.7404	3.55677	14,869.1
Area	12.9039	4.67788	1.99059	0.02986	0.37821	0.37821	5,943.89
Energy	0.12884	2.20199	0.93702	0.01406	0.17803	0.17803	4,900.74
Water	—	—	—	—	—	—	185.953
Waste	—	—	—	—	—	—	409.607
Refrig.	—	—	—	—	—	—	3.89377
Total	20.8771	13.7253	55.1008	0.18607	14.2966	4.11301	26,313.2
Average Daily	—	—	—	—	—	—	—
Mobile	7.67192	6.85236	53.2371	0.14180	13.3591	3.45985	14,846.1
Area	14.2711	0.45835	15.1752	0.00276	0.03825	0.03522	453.279
Energy	0.12884	2.20199	0.93702	0.01406	0.17803	0.17803	4,900.74
Water	—	—	—	—	—	—	185.953
Waste	—	—	—	—	—	—	409.607
Refrig.	—	—	—	—	—	—	3.89377
Total	22.0719	9.51269	69.3493	0.15862	13.5754	3.67311	20,799.6
Annual	—	—	—	—	—	—	—
Mobile	1.40013	1.25056	9.71577	0.02588	2.43803	0.63142	2,457.95
Area	2.60448	0.08365	2.76948	0.00050	0.00698	0.00643	75.0455
Energy	0.02351	0.40186	0.17101	0.00257	0.03249	0.03249	811.374
Water	—	—	—	—	—	—	30.7866

Waste	—	—	—	—	—	—	67.8151
Refrig.	—	—	—	—	—	—	0.64466
Total	4.02812	1.73607	12.6562	0.02895	2.47751	0.67034	3,443.61

## 2.5. Operations Emissions by Sector, Mitigated

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

Sector	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	8.40690	6.38812	60.9055	0.15163	13.7403	3.55667	15,861.9
Area	15.2723	4.87928	23.9473	0.03091	0.39624	0.39182	6,011.29
Energy	0.12884	2.20199	0.93702	0.01406	0.17803	0.17803	3,895.66
Water	—	—	—	—	—	—	185.953
Waste	—	—	—	—	—	—	409.607
Refrig.	—	—	—	—	—	—	3.89377
Total	23.8080	13.4694	85.7898	0.19659	14.3146	4.12652	26,368.3
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	7.84442	6.84545	52.1732	0.14215	13.7404	3.55677	14,869.1
Area	12.9039	4.67788	1.99059	0.02986	0.37821	0.37821	5,943.89
Energy	0.12884	2.20199	0.93702	0.01406	0.17803	0.17803	3,895.66
Water	—	—	—	—	—	—	185.953
Waste	—	—	—	—	—	—	409.607
Refrig.	—	—	—	—	—	—	3.89377
Total	20.8771	13.7253	55.1008	0.18607	14.2966	4.11301	25,308.1
Average Daily	—	—	—	—	—	—	—
Mobile	7.67192	6.85236	53.2371	0.14180	13.3591	3.45985	14,846.1
Area	14.2711	0.45835	15.1752	0.00276	0.03825	0.03522	453.279
Energy	0.12884	2.20199	0.93702	0.01406	0.17803	0.17803	3,895.66
Water	—	—	—	—	—	—	185.953

Waste	—	—	—	—	—	—	409.607
Refrig.	—	—	—	—	—	—	3.89377
Total	22.0719	9.51269	69.3493	0.15862	13.5754	3.67311	19,794.5
Annual	—	—	—	—	—	—	—
Mobile	1.40013	1.25056	9.71577	0.02588	2.43803	0.63142	2,457.95
Area	2.60448	0.08365	2.76948	0.00050	0.00698	0.00643	75.0455
Energy	0.02351	0.40186	0.17101	0.00257	0.03249	0.03249	644.971
Water	—	—	—	—	—	—	30.7866
Waste	—	—	—	—	—	—	67.8151
Refrig.	—	—	—	—	—	—	0.64466
Total	4.02812	1.73607	12.6562	0.02895	2.47751	0.67034	3,277.21

### 3. Construction Emissions Details

#### 3.1. Site Preparation (2027)

##### 3.1.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	3.64578	32.7450	30.3726	0.05106	1.61987	1.49028	5,551.71
Dust From Material Movement	—	—	—	—	5.66228	2.68618	—
Demolition	—	—	—	—	1.03566	0.15683	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	3.64578	32.7450	30.3726	0.05106	1.61987	1.49028	5,551.71
Dust From Material Movement	—	—	—	—	5.66228	2.68618	—

Demolition	—	—	—	—	1.03566	0.15683	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.29965	2.69137	2.49638	0.00420	0.13314	0.12249	456.305
Dust From Material Movement	—	—	—	—	0.46539	0.22078	—
Demolition	—	—	—	—	0.08512	0.01289	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.05469	0.49117	0.45559	0.00077	0.02430	0.02235	75.5465
Dust From Material Movement	—	—	—	—	0.08493	0.04029	—
Demolition	—	—	—	—	0.01553	0.00235	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.07215	0.06115	1.17305	0.00000	0.22874	0.05362	239.979
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01941	1.44715	0.82063	0.00867	0.36384	0.11161	1,312.11
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.06752	0.06906	0.88370	0.00000	0.22874	0.05362	219.683
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01817	1.50869	0.82600	0.00867	0.36384	0.11161	1,310.29
Average Daily	—	—	—	—	—	—	—
Worker	0.00558	0.00626	0.07612	0.00000	0.01851	0.00433	18.3314
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.00156	0.12478	0.06762	0.00071	0.02957	0.00909	107.750
Annual	—	—	—	—	—	—	—
Worker	0.00102	0.00114	0.01389	0.00000	0.00338	0.00079	3.03497
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00028	0.02277	0.01234	0.00013	0.00540	0.00166	17.8393

3.1.3. Onsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	3.64578	32.7450	30.3726	0.05106	1.61987	1.49028	5,551.71
Dust From Material Movement	—	—	—	—	5.66228	2.68618	—
Demolition	—	—	—	—	1.03566	0.15683	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	3.64578	32.7450	30.3726	0.05106	1.61987	1.49028	5,551.71
Dust From Material Movement	—	—	—	—	5.66228	2.68618	—
Demolition	—	—	—	—	1.03566	0.15683	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.29965	2.69137	2.49638	0.00420	0.13314	0.12249	456.305
Dust From Material Movement	—	—	—	—	0.46539	0.22078	—
Demolition	—	—	—	—	0.08512	0.01289	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.05469	0.49117	0.45559	0.00077	0.02430	0.02235	75.5465

Dust From Material Movement	—	—	—	—	0.08493	0.04029	—
Demolition	—	—	—	—	0.01553	0.00235	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

### 3.1.4. Offsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.07215	0.06115	1.17305	0.00000	0.22874	0.05362	239.979
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01941	1.44715	0.82063	0.00867	0.36384	0.11161	1,312.11
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.06752	0.06906	0.88370	0.00000	0.22874	0.05362	219.683
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01817	1.50869	0.82600	0.00867	0.36384	0.11161	1,310.29
Average Daily	—	—	—	—	—	—	—
Worker	0.00558	0.00626	0.07612	0.00000	0.01851	0.00433	18.3314
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00156	0.12478	0.06762	0.00071	0.02957	0.00909	107.750
Annual	—	—	—	—	—	—	—
Worker	0.00102	0.00114	0.01389	0.00000	0.00338	0.00079	3.03497
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00028	0.02277	0.01234	0.00013	0.00540	0.00166	17.8393

### 3.2. Grading (2027)

#### 3.2.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	3.24250	27.9664	28.3283	0.06201	1.26714	1.16577	6,738.58
Dust From Material Movement	—	—	—	—	2.67076	0.98007	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.48860	4.21411	4.26865	0.00934	0.19094	0.17566	1,015.40
Dust From Material Movement	—	—	—	—	0.40244	0.14768	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.08917	0.76908	0.77903	0.00171	0.03485	0.03206	168.111
Dust From Material Movement	—	—	—	—	0.07345	0.02695	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

### 3.2.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.08245	0.06989	1.34063	0.00000	0.26142	0.06128	274.262
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01978	1.47477	0.83629	0.00884	0.37078	0.11374	1,337.15
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	0.01169	0.01312	0.15949	0.00000	0.03878	0.00908	38.4086
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.00292	0.23313	0.12633	0.00133	0.05524	0.01698	201.313
Annual	—	—	—	—	—	—	—
Worker	0.00213	0.00239	0.02911	0.00000	0.00708	0.00166	6.35898
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00053	0.04255	0.02306	0.00024	0.01008	0.00310	33.3297

### 3.2.3. Onsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	3.24250	27.9664	28.3283	0.06201	1.26714	1.16577	6,738.58
Dust From Material Movement	—	—	—	—	2.67076	0.98007	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.48860	4.21411	4.26865	0.00934	0.19094	0.17566	1,015.40
Dust From Material Movement	—	—	—	—	0.40244	0.14768	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.08917	0.76908	0.77903	0.00171	0.03485	0.03206	168.111
Dust From Material Movement	—	—	—	—	0.07345	0.02695	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

### 3.2.4. Offsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.08245	0.06989	1.34063	0.00000	0.26142	0.06128	274.262
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01978	1.47477	0.83629	0.00884	0.37078	0.11374	1,337.15
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	0.01169	0.01312	0.15949	0.00000	0.03878	0.00908	38.4086
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00292	0.23313	0.12633	0.00133	0.05524	0.01698	201.313
Annual	—	—	—	—	—	—	—
Worker	0.00213	0.00239	0.02911	0.00000	0.00708	0.00166	6.35898
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00053	0.04255	0.02306	0.00024	0.01008	0.00310	33.3297

### 3.3. Building Construction (2027)

#### 3.3.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.11196	10.1725	14.0369	0.02554	0.36460	0.33543	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.11196	10.1725	14.0369	0.02554	0.36460	0.33543	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.41127	3.76245	5.19172	0.00945	0.13485	0.12406	975.969
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.07506	0.68665	0.94749	0.00172	0.02461	0.02264	161.583
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.66500	0.56365	10.8125	0.00000	2.10839	0.49420	2,211.98
Vendor	0.03263	1.64400	0.89433	0.01180	0.47273	0.14769	1,638.61
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.62233	0.63655	8.14535	0.00000	2.10839	0.49420	2,024.89
Vendor	0.03032	1.72501	0.90706	0.01180	0.47273	0.14769	1,635.90
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Worker	0.23149	0.25977	3.15734	0.00000	0.76780	0.17978	760.352
Vendor	0.01164	0.63768	0.33292	0.00437	0.17269	0.05409	605.420
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Worker	0.04225	0.04741	0.57622	0.00000	0.14012	0.03281	125.885
Vendor	0.00212	0.11638	0.06076	0.00080	0.03152	0.00987	100.234
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.3. Onsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

Off-Road Equipment	1.11196	10.1725	14.0369	0.02554	0.36460	0.33543	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.11196	10.1725	14.0369	0.02554	0.36460	0.33543	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.41127	3.76245	5.19172	0.00945	0.13485	0.12406	975.969
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.07506	0.68665	0.94749	0.00172	0.02461	0.02264	161.583
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.4. Offsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.66500	0.56365	10.8125	0.00000	2.10839	0.49420	2,211.98
Vendor	0.03263	1.64400	0.89433	0.01180	0.47273	0.14769	1,638.61
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.62233	0.63655	8.14535	0.00000	2.10839	0.49420	2,024.89
Vendor	0.03032	1.72501	0.90706	0.01180	0.47273	0.14769	1,635.90
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Worker	0.23149	0.25977	3.15734	0.00000	0.76780	0.17978	760.352
Vendor	0.01164	0.63768	0.33292	0.00437	0.17269	0.05409	605.420
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—

Worker	0.04225	0.04741	0.57622	0.00000	0.14012	0.03281	125.885
Vendor	0.00212	0.11638	0.06076	0.00080	0.03152	0.00987	100.234
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

### 3.4. Building Construction (2028)

#### 3.4.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.07097	9.66028	14.0357	0.02555	0.32561	0.29956	2,639.17
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.07097	9.66028	14.0357	0.02555	0.32561	0.29956	2,639.17
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.48414	4.36698	6.34492	0.01155	0.14719	0.13542	1,193.05
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.08836	0.79697	1.15795	0.00211	0.02686	0.02471	197.523
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

#### 3.4.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.63655	0.55654	10.0141	0.00000	2.10839	0.49420	2,169.70
Vendor	0.03263	1.57688	0.86609	0.01180	0.47273	0.13589	1,601.94

Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.60099	0.56365	7.53013	0.00000	2.10839	0.49420	1,987.16
Vendor	0.03032	1.64609	0.87998	0.01180	0.47273	0.13589	1,599.66
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Worker	0.27007	0.28454	3.61061	0.00000	0.93842	0.21973	911.863
Vendor	0.01423	0.74370	0.39466	0.00534	0.21106	0.06077	723.492
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Worker	0.04929	0.05193	0.65894	0.00000	0.17126	0.04010	150.969
Vendor	0.00260	0.13573	0.07203	0.00097	0.03852	0.01109	119.782
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.3. Onsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.07097	9.66028	14.0357	0.02555	0.32561	0.29956	2,639.17
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.07097	9.66028	14.0357	0.02555	0.32561	0.29956	2,639.17
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.48414	4.36698	6.34492	0.01155	0.14719	0.13542	1,193.05
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.08836	0.79697	1.15795	0.00211	0.02686	0.02471	197.523

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
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### 3.4.4. Offsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.63655	0.55654	10.0141	0.00000	2.10839	0.49420	2,169.70
Vendor	0.03263	1.57688	0.86609	0.01180	0.47273	0.13589	1,601.94
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.60099	0.56365	7.53013	0.00000	2.10839	0.49420	1,987.16
Vendor	0.03032	1.64609	0.87998	0.01180	0.47273	0.13589	1,599.66
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Worker	0.27007	0.28454	3.61061	0.00000	0.93842	0.21973	911.863
Vendor	0.01423	0.74370	0.39466	0.00534	0.21106	0.06077	723.492
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Worker	0.04929	0.05193	0.65894	0.00000	0.17126	0.04010	150.969
Vendor	0.00260	0.13573	0.07203	0.00097	0.03852	0.01109	119.782
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

### 3.5. Paving (2027)

#### 3.5.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

Off-Road Equipment	0.73744	6.94439	9.95313	0.01395	0.29813	0.27428	1,516.29
Paving	0.44731	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.11112	1.04642	1.49979	0.00210	0.04492	0.04133	228.482
Paving	0.06740	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.02028	0.19097	0.27371	0.00038	0.00820	0.00754	37.8279
Paving	0.01230	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

### 3.5.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.06184	0.05241	1.00547	0.00000	0.19606	0.04596	205.696
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	0.00877	0.00984	0.11962	0.00000	0.02909	0.00681	28.8064
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Worker	0.00160	0.00180	0.02183	0.00000	0.00531	0.00124	4.76923
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
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3.5.3. Onsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.73744	6.94439	9.95313	0.01395	0.29813	0.27428	1,516.29
Paving	0.44731	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.11112	1.04642	1.49979	0.00210	0.04492	0.04133	228.482
Paving	0.06740	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.02028	0.19097	0.27371	0.00038	0.00820	0.00754	37.8279
Paving	0.01230	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.4. Offsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.06184	0.05241	1.00547	0.00000	0.19606	0.04596	205.696
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—

Worker	0.00877	0.00984	0.11962	0.00000	0.02909	0.00681	28.8064
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Worker	0.00160	0.00180	0.02183	0.00000	0.00531	0.00124	4.76923
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

### 3.6. Architectural Coating (2028)

#### 3.6.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.14308	1.07752	1.49111	0.00230	0.02048	0.01884	178.634
Architectural Coatings	63.9389	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.14308	1.07752	1.49111	0.00230	0.02048	0.01884	178.634
Architectural Coatings	63.9389	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.02156	0.16237	0.22469	0.00035	0.00309	0.00284	26.9174
Architectural Coatings	9.63463	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.00393	0.02963	0.04101	0.00006	0.00056	0.00052	4.45648
Architectural Coatings	1.75832	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
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3.6.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.12731	0.11131	2.00282	0.00000	0.42168	0.09884	433.939
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.12020	0.11273	1.50603	0.00000	0.42168	0.09884	397.431
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Worker	0.01800	0.01897	0.24071	0.00000	0.06256	0.01465	60.7909
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Worker	0.00329	0.00346	0.04393	0.00000	0.01142	0.00267	10.0646
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.3. Onsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.14308	1.07752	1.49111	0.00230	0.02048	0.01884	178.634
Architectural Coatings	63.9389	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.14308	1.07752	1.49111	0.00230	0.02048	0.01884	178.634
Architectural Coatings	63.9389	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.02156	0.16237	0.22469	0.00035	0.00309	0.00284	26.9174
Architectural Coatings	9.63463	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.00393	0.02963	0.04101	0.00006	0.00056	0.00052	4.45648
Architectural Coatings	1.75832	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.4. Offsite - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.12731	0.11131	2.00282	0.00000	0.42168	0.09884	433.939
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.12020	0.11273	1.50603	0.00000	0.42168	0.09884	397.431
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—
Worker	0.01800	0.01897	0.24071	0.00000	0.06256	0.01465	60.7909
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—
Worker	0.00329	0.00346	0.04393	0.00000	0.01142	0.00267	10.0646
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

## 4. Operations Emissions Details

### 4.1. Mobile Emissions by Land Use

#### 4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	8.26320	6.27893	59.8644	0.14904	13.5054	3.49587	15,590.8
Apartments Low Rise	0.14369	0.10919	1.04103	0.00259	0.23486	0.06079	271.120
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	8.40690	6.38812	60.9055	0.15163	13.7403	3.55667	15,861.9
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	7.71034	6.72844	51.2814	0.13972	13.5055	3.49597	14,614.9
Apartments Low Rise	0.13408	0.11701	0.89177	0.00243	0.23486	0.06079	254.150
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	7.84442	6.84545	52.1732	0.14215	13.7404	3.55677	14,869.1

Annual	—	—	—	—	—	—	—
Single Family Housing	1.37812	1.23090	9.56308	0.02547	2.39972	0.62150	2,419.32
Apartments Low Rise	0.02200	0.01965	0.15269	0.00041	0.03831	0.00992	38.6274
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	1.40013	1.25056	9.71577	0.02588	2.43803	0.63142	2,457.95

4.1.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	8.26320	6.27893	59.8644	0.14904	13.5054	3.49587	15,590.8
Apartments Low Rise	0.14369	0.10919	1.04103	0.00259	0.23486	0.06079	271.120
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	8.40690	6.38812	60.9055	0.15163	13.7403	3.55667	15,861.9
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	7.71034	6.72844	51.2814	0.13972	13.5055	3.49597	14,614.9
Apartments Low Rise	0.13408	0.11701	0.89177	0.00243	0.23486	0.06079	254.150
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	7.84442	6.84545	52.1732	0.14215	13.7404	3.55677	14,869.1
Annual	—	—	—	—	—	—	—

Single Family Housing	1.37812	1.23090	9.56308	0.02547	2.39972	0.62150	2,419.32
Apartments Low Rise	0.02200	0.01965	0.15269	0.00041	0.03831	0.00992	38.6274
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	1.40013	1.25056	9.71577	0.02588	2.43803	0.63142	2,457.95

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	1,996.40
Apartments Low Rise	—	—	—	—	—	—	31.2917
Parking Lot	—	—	—	—	—	—	70.2589
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	2,097.95
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	1,996.40
Apartments Low Rise	—	—	—	—	—	—	31.2917
Parking Lot	—	—	—	—	—	—	70.2589
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	2,097.95

Annual	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	330.527
Apartments Low Rise	—	—	—	—	—	—	5.18070
Parking Lot	—	—	—	—	—	—	11.6322
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	347.340

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	1,015.40
Apartments Low Rise	—	—	—	—	—	—	7.20759
Parking Lot	—	—	—	—	—	—	70.2589
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	1,092.87
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	1,015.40
Apartments Low Rise	—	—	—	—	—	—	7.20759
Parking Lot	—	—	—	—	—	—	70.2589
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	1,092.87
Annual	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	168.111
Apartments Low Rise	—	—	—	—	—	—	1.19330
Parking Lot	—	—	—	—	—	—	11.6322
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	180.937

#### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	0.12712	2.17255	0.92449	0.01387	0.17565	0.17565	2,765.32
Apartments Low Rise	0.00172	0.02944	0.01253	0.00019	0.00238	0.00238	37.4709
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.12884	2.20199	0.93702	0.01406	0.17803	0.17803	2,802.79
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	0.12712	2.17255	0.92449	0.01387	0.17565	0.17565	2,765.32
Apartments Low Rise	0.00172	0.02944	0.01253	0.00019	0.00238	0.00238	37.4709
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.12884	2.20199	0.93702	0.01406	0.17803	0.17803	2,802.79
Annual	—	—	—	—	—	—	—
Single Family Housing	0.02320	0.39649	0.16872	0.00253	0.03206	0.03206	457.830

Apartments Low Rise	0.00031	0.00537	0.00229	0.00003	0.00043	0.00043	6.20374
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.02351	0.40186	0.17101	0.00257	0.03249	0.03249	464.034

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	0.12712	2.17255	0.92449	0.01387	0.17565	0.17565	2,765.32
Apartments Low Rise	0.00172	0.02944	0.01253	0.00019	0.00238	0.00238	37.4709
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.12884	2.20199	0.93702	0.01406	0.17803	0.17803	2,802.79
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	0.12712	2.17255	0.92449	0.01387	0.17565	0.17565	2,765.32
Apartments Low Rise	0.00172	0.02944	0.01253	0.00019	0.00238	0.00238	37.4709
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.12884	2.20199	0.93702	0.01406	0.17803	0.17803	2,802.79
Annual	—	—	—	—	—	—	—
Single Family Housing	0.02320	0.39649	0.16872	0.00253	0.03206	0.03206	457.830
Apartments Low Rise	0.00031	0.00537	0.00229	0.00003	0.00043	0.00043	6.20374

Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.02351	0.40186	0.17101	0.00257	0.03249	0.03249	464.034

### 4.3. Area Emissions by Source

#### 4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Hearths	0.27371	4.67788	1.99059	0.02986	0.37821	0.37821	5,943.89
Consumer Products	11.6667	—	—	—	—	—	—
Architectural Coatings	0.96346	—	—	—	—	—	—
Landscape Equipment	2.36843	0.20140	21.9567	0.00105	0.01802	0.01361	67.3987
Total	15.2723	4.87928	23.9473	0.03091	0.39624	0.39182	6,011.29
Daily, Winter (Max)	—	—	—	—	—	—	—
Hearths	0.27371	4.67788	1.99059	0.02986	0.37821	0.37821	5,943.89
Consumer Products	11.6667	—	—	—	—	—	—
Architectural Coatings	0.96346	—	—	—	—	—	—
Total	12.9039	4.67788	1.99059	0.02986	0.37821	0.37821	5,943.89
Annual	—	—	—	—	—	—	—
Hearths	0.00342	0.05847	0.02488	0.00037	0.00473	0.00473	67.4026
Consumer Products	2.12917	—	—	—	—	—	—
Architectural Coatings	0.17583	—	—	—	—	—	—
Landscape Equipment	0.29605	0.02517	2.74459	0.00013	0.00225	0.00170	7.64289
Total	2.60448	0.08365	2.76948	0.00050	0.00698	0.00643	75.0455

## 4.3.2. Mitigated

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

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Hearths	0.27371	4.67788	1.99059	0.02986	0.37821	0.37821	5,943.89
Consumer Products	11.6667	—	—	—	—	—	—
Architectural Coatings	0.96346	—	—	—	—	—	—
Landscape Equipment	2.36843	0.20140	21.9567	0.00105	0.01802	0.01361	67.3987
Total	15.2723	4.87928	23.9473	0.03091	0.39624	0.39182	6,011.29
Daily, Winter (Max)	—	—	—	—	—	—	—
Hearths	0.27371	4.67788	1.99059	0.02986	0.37821	0.37821	5,943.89
Consumer Products	11.6667	—	—	—	—	—	—
Architectural Coatings	0.96346	—	—	—	—	—	—
Total	12.9039	4.67788	1.99059	0.02986	0.37821	0.37821	5,943.89
Annual	—	—	—	—	—	—	—
Hearths	0.00342	0.05847	0.02488	0.00037	0.00473	0.00473	67.4026
Consumer Products	2.12917	—	—	—	—	—	—
Architectural Coatings	0.17583	—	—	—	—	—	—
Landscape Equipment	0.29605	0.02517	2.74459	0.00013	0.00225	0.00170	7.64289
Total	2.60448	0.08365	2.76948	0.00050	0.00698	0.00643	75.0455

## 4.4. Water Emissions by Land Use

## 4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	178.858

Apartments Low Rise	—	—	—	—	—	—	4.45323
Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	2.64199
Total	—	—	—	—	—	—	185.953
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	178.858
Apartments Low Rise	—	—	—	—	—	—	4.45323
Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	2.64199
Total	—	—	—	—	—	—	185.953
Annual	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	29.6119
Apartments Low Rise	—	—	—	—	—	—	0.73728
Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	0.43741
Total	—	—	—	—	—	—	30.7866

4.4.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	178.858
Apartments Low Rise	—	—	—	—	—	—	4.45323

Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	2.64199
Total	—	—	—	—	—	—	185.953
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	178.858
Apartments Low Rise	—	—	—	—	—	—	4.45323
Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	2.64199
Total	—	—	—	—	—	—	185.953
Annual	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	29.6119
Apartments Low Rise	—	—	—	—	—	—	0.73728
Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	0.43741
Total	—	—	—	—	—	—	30.7866

### 4.5. Waste Emissions by Land Use

#### 4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	401.336

Apartments Low Rise	—	—	—	—	—	—	8.00358
Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.26756
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	409.607
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	401.336
Apartments Low Rise	—	—	—	—	—	—	8.00358
Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.26756
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	409.607
Annual	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	66.4458
Apartments Low Rise	—	—	—	—	—	—	1.32508
Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.04430
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	67.8151

4.5.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	401.336
Apartments Low Rise	—	—	—	—	—	—	8.00358

Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.26756
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	409.607
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	401.336
Apartments Low Rise	—	—	—	—	—	—	8.00358
Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.26756
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	409.607
Annual	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	66.4458
Apartments Low Rise	—	—	—	—	—	—	1.32508
Parking Lot	—	—	—	—	—	—	0.00000
City Park	—	—	—	—	—	—	0.04430
Other Asphalt Surfaces	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	67.8151

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	3.84062

Apartments Low Rise	—	—	—	—	—	—	0.05314
City Park	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	3.89377
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	3.84062
Apartments Low Rise	—	—	—	—	—	—	0.05314
City Park	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	3.89377
Annual	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	0.63586
Apartments Low Rise	—	—	—	—	—	—	0.00880
City Park	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	0.64466

4.6.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	3.84062
Apartments Low Rise	—	—	—	—	—	—	0.05314
City Park	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	3.89377
Daily, Winter (Max)	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	3.84062
Apartments Low Rise	—	—	—	—	—	—	0.05314
City Park	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	3.89377
Annual	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	0.63586
Apartments Low Rise	—	—	—	—	—	—	0.00880
City Park	—	—	—	—	—	—	0.00000
Total	—	—	—	—	—	—	0.64466

#### 4.7. Offroad Emissions By Equipment Type

##### 4.7.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

##### 4.7.2. Mitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

#### 4.8. Stationary Emissions By Equipment Type

## 4.8.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

## 4.8.2. Mitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	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	ROG	NOx	CO	SO2	PM10T	PM2.5T	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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

#### 4.10. Soil Carbon Accumulation By Vegetation Type

##### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—

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

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

Species	ROG	NOx	CO	SO2	PM10T	PM2.5T	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	3/1/2027	4/9/2027	5.00000	30.0000	—
Grading	Grading	4/10/2027	6/25/2027	5.00000	55.0000	—
Building Construction	Building Construction	6/26/2027	8/18/2028	5.00000	300.000	—
Paving	Paving	6/26/2027	9/10/2027	5.00000	55.0000	—
Architectural Coating	Architectural Coating	8/11/2028	10/26/2028	5.00000	55.0000	—

### 5.2. Off-Road Equipment

#### 5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	0.00000	8.00000	84.0000	0.37000
Site Preparation	Crawler Tractors	Diesel	Average	4.00000	8.00000	87.0000	0.43000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Grading	Tractors/Loaders/Back hoes	Diesel	Average	0.00000	8.00000	84.0000	0.37000
Grading	Crawler Tractors	Diesel	Average	2.00000	8.00000	87.0000	0.43000
Building Construction	Cranes	Diesel	Average	1.000000	8.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000

Building Construction	Tractors/Loaders/Back	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000

### 5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	0.00000	8.00000	84.0000	0.37000
Site Preparation	Crawler Tractors	Diesel	Average	4.00000	8.00000	87.0000	0.43000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Grading	Tractors/Loaders/Back hoes	Diesel	Average	0.00000	8.00000	84.0000	0.37000
Grading	Crawler Tractors	Diesel	Average	2.00000	8.00000	87.0000	0.43000
Building Construction	Cranes	Diesel	Average	1.000000	8.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000

Architectural Coating	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000
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## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2000	HHDT,MHDT
Site Preparation	Hauling	18.7333	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	—	10.2000	HHDT,MHDT
Grading	Hauling	19.0909	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	161.304	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	52.4924	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	—	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	32.2608	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

### 5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2000	HHDT,MHDT
Site Preparation	Hauling	18.7333	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	—	10.2000	HHDT,MHDT
Grading	Hauling	19.0909	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	161.304	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	52.4924	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	—	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	32.2608	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

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	1,100,932	366,977	0.00000	0.00000	24,541.7

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Site Preparation	—	—	105.000	2,248.00	0.00000
Grading	—	8,395.00	220.000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	12.4203

### 5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

## 5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	Single Family Housing	3.03030	0%
Paving	Apartments Low Rise	—	0%
Paving	Parking Lot	1.93000	100%
Paving	City Park	0.00000	0%
Paving	Other Asphalt Surfaces	4.33000	100%
Paving	Other Asphalt Surfaces	3.13000	100%

### 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	346.196	0.03300	0.00400
2028	0.00000	346.196	0.03300	0.00400

### 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
Single Family Housing	2,499.75	2,483.25	2,318.25	902,084	18,902.9	18,778.1	17,530.4	6,821,495
Apartments Low Rise	43.4700	31.8500	27.0200	14,402.9	328.717	240.847	204.323	108,914
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

#### 5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	2,499.75	2,483.25	2,318.25	902,084	18,902.9	18,778.1	17,530.4	6,821,495
Apartments Low Rise	43.4700	31.8500	27.0200	14,402.9	328.717	240.847	204.323	108,914
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

## 5.10. Operational Area Sources

### 5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Single Family Housing	Wood Fireplaces	0	0
Single Family Housing	Gas Fireplaces	275	275
Single Family Housing	Propane Fireplaces	0	0
Single Family Housing	Electric Fireplaces	0	0
Single Family Housing	No Fireplaces	0	0
Single Family Housing	Conventional Wood Stoves	0	0
Single Family Housing	Catalytic Wood Stoves	0	0
Single Family Housing	Non-Catalytic Wood Stoves	0	0
Single Family Housing	Pellet Wood Stoves	0	0
Apartments Low Rise	Wood Fireplaces	0	0
Apartments Low Rise	Gas Fireplaces	7	7
Apartments Low Rise	Propane Fireplaces	0	0
Apartments Low Rise	Electric Fireplaces	0	0
Apartments Low Rise	No Fireplaces	0	0
Apartments Low Rise	Conventional Wood Stoves	0	0
Apartments Low Rise	Catalytic Wood Stoves	0	0
Apartments Low Rise	Non-Catalytic Wood Stoves	0	0
Apartments Low Rise	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0

Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0
City Park	Wood Fireplaces	0	0
City Park	Gas Fireplaces	0	0
City Park	Propane Fireplaces	0	0
City Park	Electric Fireplaces	0	0
City Park	No Fireplaces	0	0
City Park	Conventional Wood Stoves	0	0
City Park	Catalytic Wood Stoves	0	0
City Park	Non-Catalytic Wood Stoves	0	0
City Park	Pellet Wood Stoves	0	0
Other Asphalt Surfaces	Wood Fireplaces	0	0
Other Asphalt Surfaces	Gas Fireplaces	0	0
Other Asphalt Surfaces	Propane Fireplaces	0	0
Other Asphalt Surfaces	Electric Fireplaces	0	0
Other Asphalt Surfaces	No Fireplaces	0	0
Other Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Pellet Wood Stoves	0	0
Other Asphalt Surfaces	Wood Fireplaces	0	0
Other Asphalt Surfaces	Gas Fireplaces	0	0
Other Asphalt Surfaces	Propane Fireplaces	0	0

Other Asphalt Surfaces	Electric Fireplaces	0	0
Other Asphalt Surfaces	No Fireplaces	0	0
Other Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Pellet Wood Stoves	0	0

### 5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1,100,932	366,977	0.00000	0.00000	24,541.7

### 5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	250.000

### 5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	250.000

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	2,092,646	346.196	0.0330	0.0040	8,604,672

Apartments Low Rise	32,800.2	346.196	0.0330	0.0040	116,596
Parking Lot	73,646.0	346.196	0.0330	0.0040	0.00000
City Park	0.00000	346.196	0.0330	0.0040	0.00000
Other Asphalt Surfaces	0.00000	346.196	0.0330	0.0040	0.00000
Other Asphalt Surfaces	0.00000	346.196	0.0330	0.0040	0.00000

### 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)
Single Family Housing	1,064,353	346.196	0.0330	0.0040	8,604,672
Apartments Low Rise	7,555.06	346.196	0.0330	0.0040	116,596
Parking Lot	73,646.0	346.196	0.0330	0.0040	0.00000
City Park	0.00000	346.196	0.0330	0.0040	0.00000
Other Asphalt Surfaces	0.00000	346.196	0.0330	0.0040	0.00000
Other Asphalt Surfaces	0.00000	346.196	0.0330	0.0040	0.00000

### 5.12. Operational Water and Wastewater Consumption

#### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	11,462,323	2,015,206
Apartments Low Rise	291,768	31,640.0
Parking Lot	0.00000	0.00000
City Park	0.00000	0.00000
Other Asphalt Surfaces	0.00000	302,899
Other Asphalt Surfaces	0.00000	218,955

#### 5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	11,462,323	2,015,206
Apartments Low Rise	291,768	31,640.0
Parking Lot	0.00000	0.00000
City Park	0.00000	0.00000
Other Asphalt Surfaces	0.00000	302,899
Other Asphalt Surfaces	0.00000	218,955

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	212.847	0.00000
Apartments Low Rise	4.24466	0.00000
Parking Lot	0.00000	0.00000
City Park	0.14190	0.00000
Other Asphalt Surfaces	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000

### 5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	212.847	0.00000
Apartments Low Rise	4.24466	0.00000
Parking Lot	0.00000	0.00000
City Park	0.14190	0.00000
Other Asphalt Surfaces	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
City Park	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000

### 5.14.2. Mitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000

Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
City Park	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

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

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

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

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

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

### 6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.6500	annual days of extreme heat
Extreme Precipitation	4.20000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	6.46000	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

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

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

## 6.2. Initial Climate Risk Scores

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

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

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

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2

Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

### 6.4. Climate Risk Reduction Measures

## 7. Health and Equity Details

### 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	100.0000
AQ-PM	54.5737
AQ-DPM	47.4051
Drinking Water	60.0974
Lead Risk Housing	44.8771
Pesticides	73.5172
Toxic Releases	41.5479
Traffic	71.6375
Effect Indicators	—
CleanUp Sites	7.70810
Groundwater	7.23892

Haz Waste Facilities/Generators	71.9921
Impaired Water Bodies	0.00000
Solid Waste	0.00000
Sensitive Population	—
Asthma	64.5314
Cardio-vascular	60.1196
Low Birth Weights	80.9854
Socioeconomic Factor Indicators	—
Education	72.2475
Housing	45.0317
Linguistic	44.3632
Poverty	43.5302
Unemployment	40.6039

## 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	44.95059669
Employed	33.01680996
Median HI	48.01745156
Education	—
Bachelor's or higher	42.93596818
High school enrollment	100
Preschool enrollment	12.34441165
Transportation	—
Auto Access	52.22635699
Active commuting	19.2865392

Social	—
2-parent households	62.19684332
Voting	40.38239446
Neighborhood	—
Alcohol availability	59.19414859
Park access	81.35506224
Retail density	54.72860259
Supermarket access	13.10150135
Tree canopy	24.98395996
Housing	—
Homeownership	57.5003208
Housing habitability	57.17952008
Low-inc homeowner severe housing cost burden	86.79584242
Low-inc renter severe housing cost burden	19.62017195
Uncrowded housing	40.20274605
Health Outcomes	—
Insured adults	55.13922751
Arthritis	42.6
Asthma ER Admissions	47.7
High Blood Pressure	42.5
Cancer (excluding skin)	47.4
Asthma	51.9
Coronary Heart Disease	51.0
Chronic Obstructive Pulmonary Disease	53.7
Diagnosed Diabetes	41.8
Life Expectancy at Birth	42.0
Cognitively Disabled	58.3
Physically Disabled	57.4

Heart Attack ER Admissions	41.5
Mental Health Not Good	51.7
Chronic Kidney Disease	45.1
Obesity	51.2
Pedestrian Injuries	44.3
Physical Health Not Good	47.6
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	50.7
Current Smoker	55.2
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	31.0
Elderly	44.5
English Speaking	62.2
Foreign-born	51.1
Outdoor Workers	59.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	69.6
Traffic Density	70.4
Traffic Access	23.0
Other Indices	—
Hardship	59.9
Other Decision Support	—
2016 Voting	61.8

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	68.0000
Healthy Places Index Score for Project Location (b)	39.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
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

### 8.1. Justifications

Screen	Justification
Land Use	The numbers have been updated to reflect the maximum units specified in the Plan. Landscaping has been assumed at 10 percent for all units, and right-of-way improvements have also been incorporated.
Construction: Construction Phases	The demolition phase was removed as the Project site is vacant. The grading and building construction phases were reduced from 75 days to 55 days, and 740 days to 300 days, respectively, to meet the anticipated operational year. The paving phase was set to begin concurrently with the building construction phase, and would be completed after the default amount of days. Architectural coating was set to begin approximately 1 week before building construction was completed, and would span the CalEEMod default amount of days.

Construction: Off-Road Equipment	Assumed all construction will be utilized 8 hours per work day as provided by client. Replaced Tractors/Loaders/Backhoes with Crawler Tractors in the Site Preparation and Grading Phases.
Construction: Demolition	As part of site preparation, Tennessee Street, the existing roadway that currently cuts across the project site, will be demolished. It is assumed that this demolition will generate approximately 2,248 tons of material.
Operations: Vehicle Data	Adjusted trip rates to match the 12th Generation ITE Trip Rates for 210 Single-Family Detached (Single Family Housing land use) and 220 Multifamily Housing Low Rise (Apartments Low Rise land use) as generated by the Project's Trip Generation.
Operations: Hearths	Removed wood stoves as they are prohibited in the SCAQMD under Rule 445.

### 8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	89.2857	23.9000
Landscape Area	sq. ft	3,221,036	102,671
Population	people	910.000	729.000
Lot Area	acre	0.43750	0.37000
Landscape Area	sq. ft	—	1,612.00
Population	people	23.0000	19.0000
Lot Area	acre	1.92600	1.93000
Landscape Area	sq. ft	—	0.00000

### 8.4. Construction

#### 8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	5/11/2027	3/1/2027
Site Preparation	Site Preparation	End Date	6/22/2027	4/9/2027
Grading	Grading	Start Date	6/23/2027	4/10/2027
Grading	Grading	End Date	10/6/2027	6/25/2027
Grading	Grading	Work Days per Phase	75.0000	55.0000

Building Construction	Building Construction	Start Date	10/7/2027	6/26/2027
Building Construction	Building Construction	End Date	8/8/2030	8/18/2028
Building Construction	Building Construction	Work Days per Phase	740.000	300.000
Paving	Paving	Start Date	8/9/2030	6/26/2027
Paving	Paving	End Date	10/25/2030	9/10/2027
Architectural Coating	Architectural Coating	Start Date	10/26/2030	8/11/2028
Architectural Coating	Architectural Coating	End Date	1/11/2031	10/26/2028

#### 8.4.2. Off-Road Equipment

Phase Name	Equipment Type	Model Parameter	Default Value	New Value
Site Preparation	Tractors/Loaders/Backhoes	Number per Day	4.00000	0.00000
Grading	Tractors/Loaders/Backhoes	Number per Day	2.00000	0.00000
Building Construction	Cranes	Hours Per Day	7.00000	8.00000
Building Construction	Tractors/Loaders/Backhoes	Hours Per Day	7.00000	8.00000
Architectural Coating	Air Compressors	Hours Per Day	6.00000	8.00000

### 8.5. Operations

#### 8.5.1. Mobile Sources

##### 8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
Single Family Housing	Weekday Trip Rate	size/day	9.44000	9.09000
Single Family Housing	Saturday Trip Rate	size/day	9.54000	9.03000
Single Family Housing	Sunday Trip Rate	size/day	8.55000	8.43000
Apartments Low Rise	Weekday Trip Rate	size/day	7.32000	6.21000
Apartments Low Rise	Saturday Trip Rate	size/day	8.14000	4.55000
Apartments Low Rise	Sunday Trip Rate	size/day	6.28000	3.86000

City Park	Weekday Trip Rate	size/day	0.78000	0.00000
City Park	Saturday Trip Rate	size/day	1.96000	0.00000
City Park	Sunday Trip Rate	size/day	2.19000	0.00000

## 8.5.2. Area Sources

### 8.5.2.1. Hearths

Land Use	Model Parameter	Default Value	New Value
Single Family Housing	Wood Fireplaces	14	0
Single Family Housing	Gas Fireplaces	234	275
Single Family Housing	No Fireplaces	28	0
Single Family Housing	Catalytic Wood Stoves	14	0
Single Family Housing	Non-Catalytic Wood Stoves	14	0
Apartments Low Rise	Wood Fireplaces	0	0
Apartments Low Rise	Gas Fireplaces	6	7
Apartments Low Rise	No Fireplaces	1	0
Apartments Low Rise	Catalytic Wood Stoves	0	0
Apartments Low Rise	Non-Catalytic Wood Stoves	0	0

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ATTACHMENT B – DETAILED CALCULATION SHEETS

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**Construction Emissions**

Construction Activity	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NOx	CO	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>2027 (Year 1)</b>						
<i>Maximum Daily Emissions (2027)</i>	3.74	34.25	36.70	0.07	8.91	4.50
<b>2028 (Year 2)</b>						
<i>Maximum Daily Emissions (2028)</i>	65.95	12.98	28.41	0.04	3.35	1.05
<b>Maximum Daily Emissions</b>	<b>65.95</b>	<b>34.25</b>	<b>36.70</b>	<b>0.07</b>	<b>8.91</b>	<b>4.50</b>
SCAQMD Thresholds	75	100	550	150	150	55
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: ROG = reactive organic gases, NOx = nitrogen oxides, CO = carbon monoxide, SOx = sulfur oxides, PM<sub>10</sub> = particulate matter 10 microns in diameter, PM<sub>2.5</sub> = particulate matter 2.5 microns in diameter

Source: CalEEMod Output Sheets.

**Construction Emissions**

Construction Activity	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NOx	CO	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>2027 (Year 1)</b>						
Site Preparation	3.74	34.32	32.37	0.06	7.87	4.34
Off-Road	3.65	32.74	30.37	0.05	1.62	1.49
Onsite Truck					5.66	2.69
Off-Site (Worker Trip)	0.07	0.07	1.17	0.00	0.23	0.05
Off-Site (Hauling Trip)	0.02	1.51	0.82	0.01	0.36	0.11
Grading	3.34	29.51	30.51	0.07	4.57	2.32
Off-Road	3.24	27.97	28.33	0.06	1.27	1.17
Onsite Truck					2.67	0.98
Off-Site (Worker Trip)	0.08	0.07	1.34	0.00	0.26	0.06
Off-Site (Hauling Trip)	0.02	1.47	0.84	0.01	0.37	0.11
Building Construction	1.81	12.53	25.76	0.04	2.95	0.98
Off-Road	1.11	10.17	14.04	0.03	0.36	0.34
Onsite Truck						
Off-Site (Worker Trip)	0.66	0.64	10.81	0.00	2.11	0.49
Off-Site (Vendor Trip)	0.03	1.73	0.91	0.01	0.47	0.15
<b>Maximum Daily Emissions (2027)</b>	<b>3.74</b>	<b>34.32</b>	<b>32.37</b>	<b>0.07</b>	<b>7.87</b>	<b>4.34</b>
<b>2028 (Year 2)</b>						
Building Construction	1.74	11.86	24.93	0.04	2.91	0.93
Off-Road	1.07	9.66	14.04	0.03	0.33	0.30
Onsite Truck						
Off-Site (Worker Trip)	0.64	0.56	10.01	0.00	2.11	0.49
Off-Site (Vendor Trip)	0.03	1.65	0.88	0.01	0.47	0.14
Paving	1.25	7.00	10.96	0.01	0.49	0.32
Off-Road	0.74	6.94	9.95	0.01	0.30	0.27
Paving	0.45					
Off-Site (Worker Trip)	0.06	0.05	1.01	0.00	0.20	0.05
Architectural Coating	64.21	1.19	3.49	0.00	0.44	0.12
Off-Road	0.14	1.08	1.49	0.00	0.02	0.02
Architectural Coating	63.94					
Off-Site (Worker Trip)	0.13	0.11	2.00	0.00	0.42	0.10
<b>Maximum Daily Emissions (2028)</b>	<b>64.21</b>	<b>11.86</b>	<b>24.93</b>	<b>0.04</b>	<b>2.91</b>	<b>0.93</b>
<b>Maximum Daily Emissions</b>	<b>64.21</b>	<b>34.32</b>	<b>32.37</b>	<b>0.07</b>	<b>7.87</b>	<b>4.34</b>
SCAQMD Thresholds	75	100	550	150	150	55
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: ROG = reactive organic gases, NOx = nitrogen oxides, CO = carbon monoxide, SOx = sulfur oxides, PM<sub>10</sub> = particulate matter 10 microns in diameter, PM<sub>2.5</sub> = particulate matter 2.5 microns in diameter

Source: CalEEMod Output Sheets.



**Construction Equipment Modeled in CalEEMod and Acres Disturbed Per Day**

<b>Activity</b>	<b>Equipment Type</b>	<b>Equipment Quantity</b>	<b>Operating Hours per Day</b>	<b>Acres Disturbed per Piece of Equipment per Day</b>	<b>Acres Disturbed per Day</b>
<b>Total Acres Disturbed Per Day</b>					
Site Preparation	Rubber Tired Dozers	3	8	0.5	1.5
	Crawler Tractors	4	8	0.5	2
<b>Total Acres Disturbed Per Day</b>					3.5
Grading	Excavators	2	8	0	0
	Graders	1	8	0.5	0.5
	Rubber Tired Dozers	1	8	0.5	0.5
	Scrapers	2	8	1	2
	Crawler Tractors	2	8	0.5	1
<b>Total Acres Disturbed Per Day</b>					4
<b>Maximum Acres Disturbed Per Day</b>					4

Source: CalEEMod Output Sheets.

**Localized Construction Emission Estimates**

Construction Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>2027 (Year 1)</b>				
Site Preparation	32.74	30.37	7.28	4.18
Grading	27.97	28.33	3.94	2.15
Building Construction and Paving	17.12	23.99	0.66	0.61
Building Construction	10.17	14.04	0.36	0.34
<b>Maximum On-site Emission (2027)</b>	<b>32.74</b>	<b>30.37</b>	<b>7.28</b>	<b>4.18</b>
<b>2028 (Year 2)</b>				
Building Construction	9.66	14.04	0.33	0.30
Building Construction and Architectural Coating	10.74	15.53	0.32	0.32
Architectural Coating	1.08	1.49	0.02	0.02
<b>Maximum On-site Emission (2028)</b>	<b>10.74</b>	<b>15.53</b>	<b>0.33</b>	<b>0.32</b>
<b>Maximum On-site Emission</b>	<b>32.74</b>	<b>30.37</b>	<b>7.28</b>	<b>4.18</b>
SCAQMD Screening Thresholds	236.7	1774.7	11.7	7.7
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>



**WEIGHTED EMFAC ADJUSTMENT FACTORS**

Year	Vehicle Category	Total ROG (exhaust and evaporative)	Exhaust Nox	CO	Sox	Total PM1	Total PM2.5 (exhaust, brake wear, and tire wear)
2027	MHDT	1.010876543	1.044475736	1	1	1.024049	1.021062
2027	HHDT	1.012452886	1.03765143	1	1	1.014017	1.013033
2028	MHDT	1.019090314	1.073037697	1	1	1.039633	1.035291
2028	HHDT	1.018389033	1.054390295	1	1	1.020998	1.019521

**Paving**

Off-Road	0.74	6.94	9.95	0.01	0.30	0.27
Paving	0.45					
Off-Site (Worker Trip)	0.06	0.05	1.01	0.00	0.20	0.05

**Construction Equipment Fuel Usage (Off-Road)**

Activity	Equipment	Number	Hours per day	Horse-power	Load Factor	Days of Construction	Total Horsepower-hours	Fuel Rate (gal/hp-hr)	Fuel Use (gallons)
Site Preparation	Crawler Tractors	4	8	87	0.43	30	35,914	0.050973456	1,830.64
	Rubber Tired Dozers	3	8	367	0.41	30	108,338	0.050796639	5,503.23
Grading	Graders	1	8	148	0.41	55	26,699	0.050739449	1,354.70
	Rubber Tired Dozers	1	8	367	0.4	55	64,592	0.050796639	3,281.06
	Crawler Tractors	2	8	87	0.43	55	32,921	0.050973456	1,678.09
	Excavators	2	8	36	0.38	55	12,038	0.051445231	619.32
	Scrapers	2	8	423	0.48	55	178,675	0.050581015	9,037.57
Building Construction	Cranes	1	8	367	0.29	300	255,432	0.044683119	11,413.50
	Forklifts	3	8	82	0.2	300	118,080	0.052915644	6,248.28
	Tractors/Loaders/Backhoes	3	8	84	0.37	300	223,776	0.052983961	11,856.54
	Generator Sets	1	8	14	0.74	300	24,864	0.080236988	1,995.01
	Welders	1	8	46	0.45	300	49,680	0.032066157	1,593.05
Paving	Pavers	2	8	81	0.42	55	29,938	0.051631034	1,545.71
	Rollers	2	8	36	0.38	55	12,038	0.052248245	628.99
	Paving Equipment	2	8	89	0.36	55	28,195	0.051165267	1,442.61
Architectual Coating	Air Compressors	1	8	37	0.48	55	7,814	0.030142906	235.55
<b>Total</b>									<b>60,263.84</b>

Source: Fuel Calculation Sheets (see Attachment C)

**Model Output: OFFROAD2021 (v1.0.5) Emissions Inventory**

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2027

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2021 Equipment Types

Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	Calendar Y	Vehicle Category	Model Year	Horsepower Bin	Fuel	Fuel Consumption	Horsepower_Hou	Fuel Rate
San Bernardino (SC)	2027	Construction and Mining - Crawler Tractors	Aggregate	Aggregate	Diesel	827186.9248	16227797.5	0.050973456
San Bernardino (SC)	2027	Construction and Mining - Excavators	Aggregate	Aggregate	Diesel	2602360.865	50585074.48	0.051445231
San Bernardino (SC)	2027	Construction and Mining - Graders	Aggregate	Aggregate	Diesel	376179.5109	7413945.484	0.050739449
San Bernardino (SC)	2027	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Diesel	1848.54	43964.25	0.042046435
San Bernardino (SC)	2027	Construction and Mining - Pavers	Aggregate	Aggregate	Diesel	167621.0865	3246518.132	0.051631034
San Bernardino (SC)	2027	Construction and Mining - Paving Equipment	Aggregate	Aggregate	Diesel	185107.3462	3617832.121	0.051165267
San Bernardino (SC)	2027	Construction and Mining - Rollers	Aggregate	Aggregate	Diesel	440030.6896	8421922.938	0.052248245
San Bernardino (SC)	2027	Construction and Mining - Rubber Tired Dozers	Aggregate	Aggregate	Diesel	103655.4807	2040597.224	0.050796639
San Bernardino (SC)	2027	Construction and Mining - Scrapers	Aggregate	Aggregate	Diesel	1054560.631	20848941.58	0.050581015
San Bernardino (SC)	2027	Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	2534805.548	47840997.16	0.052983961
San Bernardino (SC)	2027	Industrial - Forklifts	Aggregate	Aggregate	Diesel	332827.3564	6289772.367	0.052915644
San Bernardino (SC)	2027	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Diesel	33384.62607	1107545.05	0.030142906
San Bernardino (SC)	2027	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Diesel	159561.6414	1988629.5	0.080236988
San Bernardino (SC)	2027	Light Commercial - Misc - Welders	Aggregate	Aggregate	Diesel	174115.5778	5429886	0.032066157
San Bernardino (SC)	2027	Construction and Mining - Misc - Cranes	Aggregate	Aggregate	Diesel	3978.5	89038.1	0.044683119
San Bernardino (SC)	2027	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Diesel	88025.96336	1163995.95	0.075623943
San Bernardino (SC)	2027	Construction and Mining - Rough Terrain Forklifts	Aggregate	Aggregate	Diesel	546655.6039	10507635.63	0.052024606
San Bernardino (SC)	2027	Construction and Mining - Other Construction Equipment	Aggregate	Aggregate	Diesel	536540.3141	10460454.54	0.051292256

**Construction On-Road Fuel Consumption**

Construction Source	Total Trips	VMТ	Fuel Rate (Gallons/Miles)	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Head Trucks	1049.4	20987.5	6.4	3,300	-
Vendor Trucks	31,495.4	321,253.4	8.9	36,029	-
Worker Vehicles	1,052,311.1	1,946,774.9	24.8	-	78,497
<b>Total</b>				<b>39,329</b>	<b>78,497</b>

Source: CalEEMod Output Sheet (see Attachment 8)

**5.3. Construction Vehicles**

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.50	18.50	LDA,LDT1,LDT2
Site Preparation	Vendor	10.20	10.20	HHDT,MHDT
Site Preparation	Hauling	18.73	20.00	HHDT
Site Preparation	Onsite truck			HHDT
Grading	Worker	20.00	18.50	LDA,LDT1,LDT2
Grading	Vendor	10.20	10.20	HHDT,MHDT
Grading	Hauling	19.09	20.00	HHDT
Grading	Onsite truck			HHDT
Building Construction	Worker	161.30	18.50	LDA,LDT1,LDT2
Building Construction	Vendor	52.49	10.20	HHDT,MHDT
Building Construction	Hauling	0.00	20.00	HHDT
Building Construction	Onsite truck			HHDT
Paving	Worker	15.00	18.50	LDA,LDT1,LDT2
Paving	Vendor	10.20	10.20	HHDT,MHDT
Paving	Hauling	0.00	20.00	HHDT
Paving	Onsite truck			HHDT
Architectural Coating	Worker	32.26	18.50	LDA,LDT1,LDT2
Architectural Coating	Vendor	10.20	10.20	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.00	HHDT
Architectural Coating	Onsite truck			HHDT

52615.53654  
105231.0731

Construction Activity	Days per phase
Site Prep	30
Grading	55
Building Construction	300
Paving	55
Coating	55

Import  
Export

CalEEMod Daily Trucks	CY/peг truck	CY	Total Trucks	Miles	Truck Miles
19	16	0	20.0	0	
19	16	8395	525	20.0	20987.5
Sum					
			525		

Source: EMFAC2025 (v2.0.0) Emissions Inventory

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2027

Season: Annual

Vehicle Classification: EMFAC2007 Categories

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

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT	Fuel Consumption	Fuel Rate	Trip %
San Bernardino (SC)	2027	HHDT	Aggregate	Aggregate	Diesel	687704552.5	108133.9724	6.359745575	100%
San Bernardino (SC)	2027	LHDT1	Aggregate	Aggregate	Diesel	94718468.11	4593.998233	20.61787212	100%
San Bernardino (SC)	2027	LHDT2	Aggregate	Aggregate	Diesel	95993311.66	5306.019583	18.09139792	100%
San Bernardino (SC)	2027	MHDT	Aggregate	Aggregate	Diesel	192445977.5	21583.24433	8.916452713	100%
San Bernardino (SC)	2027	LDA	Aggregate	Aggregate	Gasoline	4064952977	151325.9411	26.86223491	50%
San Bernardino (SC)	2027	LDT1	Aggregate	Aggregate	Gasoline	379679500.3	16788.91918	22.61488641	25%
San Bernardino (SC)	2027	LDT2	Aggregate	Aggregate	Gasoline	2500201275	109353.3964	22.86349905	25%
50/25/25 Splits						24.80071382			

**Construction Fuel Consumption Summary**

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
On-Road Construction Vehicles	39,329	78,497
Off-Road Construction Equipment	60,264	-
<b>Total</b>	<b>99,593</b>	<b>78,497</b>
On-Road Countywide	264,229,526	664,752,209
Off-Road Countywide	19,277,838	463,498
<b>On-Road Percentage</b>	<b>0.01%</b>	<b>0.01%</b>
<b>Off-Road Percentage</b>	<b>0.31%</b>	-

**Model Output: OFFROAD2021 (v1.0.5) Emissions Inventory**

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2026

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2021 Equipment Types

Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	Calendar Year	Vehicle Category	Model Year	Horsepower	Fuel Consumption
San Bernardino		2027 Construction and Mining - Bore/Drill Rigs	Aggregate	Aggregate	413292.5435
San Bernardino		2027 Construction and Mining - Bucket	Aggregate	Aggregate	9648.864388
San Bernardino		2027 Construction and Mining - Compactor	Aggregate	Aggregate	15701.87632
San Bernardino		2027 Construction and Mining - Concrete Mixer	Aggregate	Aggregate	1455.606812
San Bernardino		2027 Construction and Mining - Concrete Pump	Aggregate	Aggregate	14813.0617
San Bernardino		2027 Construction and Mining - Crane less than 3t	Aggregate	Aggregate	7131.755052
San Bernardino		2027 Construction and Mining - Cranes	Aggregate	Aggregate	360619.7217
San Bernardino		2027 Construction and Mining - Crawler Tractors	Aggregate	Aggregate	1063513.7
San Bernardino		2027 Construction and Mining - Crushing/Processing	Aggregate	Aggregate	56163.21895
San Bernardino		2027 Construction and Mining - Excavators	Aggregate	Aggregate	3345853.7
San Bernardino		2027 Construction and Mining - Graders	Aggregate	Aggregate	483653.7566
San Bernardino		2027 Construction and Mining - Hopper Tractor Tr	Aggregate	Aggregate	949.6539711
San Bernardino		2027 Construction and Mining - Misc - Bore/Drill F	Aggregate	Aggregate	40.26
San Bernardino		2027 Construction and Mining - Misc - Cement An	Aggregate	Aggregate	58.35
San Bernardino		2027 Construction and Mining - Misc - Concrete/It	Aggregate	Aggregate	2276.82
San Bernardino		2027 Construction and Mining - Misc - Dumpers/T	Aggregate	Aggregate	4.711
San Bernardino		2027 Construction and Mining - Misc - Excavators	Aggregate	Aggregate	33.65
San Bernardino		2027 Construction and Mining - Misc - Other	Aggregate	Aggregate	125.43
San Bernardino		2027 Construction and Mining - Misc - Pavers	Aggregate	Aggregate	8.88
San Bernardino		2027 Construction and Mining - Misc - Paving Equi	Aggregate	Aggregate	15.04
San Bernardino		2027 Construction and Mining - Misc - Plate Comp	Aggregate	Aggregate	42.03
San Bernardino		2027 Construction and Mining - Misc - Rollers	Aggregate	Aggregate	257.2
San Bernardino		2027 Construction and Mining - Misc - Rubber Tire	Aggregate	Aggregate	6.17
San Bernardino		2027 Construction and Mining - Misc - Signal Boar	Aggregate	Aggregate	1652.45
San Bernardino		2027 Construction and Mining - Misc - Skid Steer L	Aggregate	Aggregate	1725
San Bernardino		2027 Construction and Mining - Misc - Tractors/Lo	Aggregate	Aggregate	161.4
San Bernardino		2027 Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	216.6
San Bernardino		2027 Construction and Mining - Nurse Rig Other	Aggregate	Aggregate	88.86855508
San Bernardino		2027 Construction and Mining - Off-Highway Trac	Aggregate	Aggregate	602342.4931
San Bernardino		2027 Construction and Mining - Off-Highway Truc	Aggregate	Aggregate	1442458.811
San Bernardino		2027 Construction and Mining - Other Constructio	Aggregate	Aggregate	689829.5386
San Bernardino		2027 Construction and Mining - Other Material H	Aggregate	Aggregate	212245.8213
San Bernardino		2027 Construction and Mining - Pavers	Aggregate	Aggregate	215510.3238
San Bernardino		2027 Construction and Mining - Paving Equipmen	Aggregate	Aggregate	237992.3966
San Bernardino		2027 Construction and Mining - Rollers	Aggregate	Aggregate	565747.1762
San Bernardino		2027 Construction and Mining - Rough Terrain For	Aggregate	Aggregate	702834.7603
San Bernardino		2027 Construction and Mining - Rubber Tired Doz	Aggregate	Aggregate	133269.7852
San Bernardino		2027 Construction and Mining - Rubber Tired Loat	Aggregate	Aggregate	2457984.458
San Bernardino		2027 Construction and Mining - Scrapers	Aggregate	Aggregate	1355847.929
San Bernardino		2027 Construction and Mining - Skid Steer Loader	Aggregate	Aggregate	1148113.72
San Bernardino		2027 Construction and Mining - Spray Truck	Aggregate	Aggregate	14135.24168
San Bernardino		2027 Construction and Mining - Spreader Tractor	Aggregate	Aggregate	1788.064723
San Bernardino		2027 Construction and Mining - Spreader Truck	Aggregate	Aggregate	11049.89509
San Bernardino		2027 Construction and Mining - Surfacing Equipm	Aggregate	Aggregate	113890.0381
San Bernardino		2027 Construction and Mining - Tank Truck	Aggregate	Aggregate	24057.22971
San Bernardino		2027 Construction and Mining - Tanker Truck Trail	Aggregate	Aggregate	1829.871734
San Bernardino		2027 Construction and Mining - Telescopic Handle	Aggregate	Aggregate	47987.91592
San Bernardino		2027 Construction and Mining - Tractors/Loaders/	Aggregate	Aggregate	3258997.872
San Bernardino		2027 Construction and Mining - Trenchers	Aggregate	Aggregate	113754.0503
San Bernardino		2027 Construction and Mining - Vacuum Truck	Aggregate	Aggregate	36746.4009
San Bernardino		2027 Construction and Mining - Water Truck	Aggregate	Aggregate	109914.0698
San Bernardino		2027 Construction and Mining - Misc - Asphalt Pa	Aggregate	Aggregate	9286.9
San Bernardino		2027 Construction and Mining - Misc - Bore/Drill F	Aggregate	Aggregate	5983.83
San Bernardino		2027 Construction and Mining - Misc - Cement An	Aggregate	Aggregate	36125
San Bernardino		2027 Construction and Mining - Misc - Concrete/It	Aggregate	Aggregate	45598.7
San Bernardino		2027 Construction and Mining - Misc - Cranes	Aggregate	Aggregate	4934.8
San Bernardino		2027 Construction and Mining - Misc - Crushing/P	Aggregate	Aggregate	225.32
San Bernardino		2027 Construction and Mining - Misc - Dumpers/T	Aggregate	Aggregate	3739.2
San Bernardino		2027 Construction and Mining - Misc - Other	Aggregate	Aggregate	7508.05
San Bernardino		2027 Construction and Mining - Misc - Paving Equi	Aggregate	Aggregate	67782.9
San Bernardino		2027 Construction and Mining - Misc - Plate Comp	Aggregate	Aggregate	24718
San Bernardino		2027 Construction and Mining - Misc - Rollers	Aggregate	Aggregate	31690.3
San Bernardino		2027 Construction and Mining - Misc - Rough Terr	Aggregate	Aggregate	34718.8
San Bernardino		2027 Construction and Mining - Misc - Rubber Tire	Aggregate	Aggregate	18432.5
San Bernardino		2027 Construction and Mining - Misc - Signal Boar	Aggregate	Aggregate	700.44
San Bernardino		2027 Construction and Mining - Misc - Skid Steer L	Aggregate	Aggregate	68122.1
San Bernardino		2027 Construction and Mining - Misc - Surfacing E	Aggregate	Aggregate	29977.4
San Bernardino		2027 Construction and Mining - Misc - Tampers/R	Aggregate	Aggregate	4169.2
San Bernardino		2027 Construction and Mining - Misc - Tractors/Lo	Aggregate	Aggregate	11815.05
San Bernardino		2027 Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	57969.15

Operational Energy Consumption

Operational Source	Energy Usage	Countywide Energy Consumption	Percentage Increase
<b>Electricity (Kilowatt-Hour)</b>			
Proposed Project	1,145,554	16,286,000,000.0	0.01%
<b>Natural Gas (Thousands British Thermal Units)</b>			
Proposed Project	8,604,671.8	45,309,168,520.0	0.02%
<b>Petroleum (Gasoline) Consumption</b>			
	<b>Annual VMT</b>	<b>Gallons of Gasoline Fuel</b>	
Proposed Project	6,930,408	664,752,208.8	0.04%
<b>Petroleum (Diesel) Consumption</b>			
	<b>Annual VMT</b>	<b>Gallons of Diesel Fuel</b>	
Proposed Project	-	264,229,526.0	0.0000%

Source: CalEEMod Output Sheets (see Attachment B)

CalEEMod Output

5.9. Operational Mobile Sources

5.9.2 Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	VTM/Year
Single Family Housing	2499.75	2483.25	6821494.84
Apartments Low Rise	43.47	31.85	108913.65
Parking Lot	0	0	0
City Park	0	0	0
Other Asphalt Surface	0	0	0
Other Non-Asphalt Su	0	0	0

5.11. Operational Energy Consumption

5.11.2 Mitigated

Land Use	Electricity (kWh/yr)	Natural Gas (kBtu/yr)
Single Family Housing	1064353.15	8604671.81
Apartments Low Rise	7555.06	116595.91
Parking Lot	73646.02	0
City Park	0	0
Other Asphalt Surface	0	0
Other Non-Asphalt Su	0	0

Source: EMFAC2025 (v2.0.0) Emissions Inventory

Region Type: County  
 Region: San Bernardino  
 Calendar Year: 2027  
 Season: Annual  
 Vehicle Classification: EMFAC2007 Categories

Units: miles/year for Combustion VMT and Electric VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Fuel Consumption, kWh/year for Energy Consumption, kg/year for Hydrogen Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Fuel Consumption
San Bernardino	2027	HHDT	Aggregate	Aggregate	Diesel	212119.6
San Bernardino	2027	LDA	Aggregate	Aggregate	Diesel	312.9814
San Bernardino	2027	LDT1	Aggregate	Aggregate	Diesel	4.898653
San Bernardino	2027	LDT2	Aggregate	Aggregate	Diesel	221.3642
San Bernardino	2027	LHDT1	Aggregate	Aggregate	Diesel	9193.014
San Bernardino	2027	LHDT2	Aggregate	Aggregate	Diesel	9964.833
San Bernardino	2027	MDV	Aggregate	Aggregate	Diesel	4216.163
San Bernardino	2027	MH	Aggregate	Aggregate	Diesel	671.7539
San Bernardino	2027	MHDT	Aggregate	Aggregate	Diesel	26111.15
San Bernardino	2027	OBUS	Aggregate	Aggregate	Diesel	653.4117
San Bernardino	2027	SBUS	Aggregate	Aggregate	Diesel	756.8038
San Bernardino	2027	UBUS	Aggregate	Aggregate	Diesel	3.522006
San Bernardino	2027	HHDT	Aggregate	Aggregate	Gasoline	22.06105
San Bernardino	2027	LDA	Aggregate	Aggregate	Gasoline	249319.8
San Bernardino	2027	LDT1	Aggregate	Aggregate	Gasoline	29318.47
San Bernardino	2027	LDT2	Aggregate	Aggregate	Gasoline	184378.1
San Bernardino	2027	LHDT1	Aggregate	Aggregate	Gasoline	19720.37
San Bernardino	2027	LHDT2	Aggregate	Aggregate	Gasoline	4956.663
San Bernardino	2027	MCY	Aggregate	Aggregate	Gasoline	1742.362
San Bernardino	2027	MDV	Aggregate	Aggregate	Gasoline	160296.5
San Bernardino	2027	MH	Aggregate	Aggregate	Gasoline	3650.267
San Bernardino	2027	MHDT	Aggregate	Aggregate	Gasoline	9372.698
San Bernardino	2027	OBUS	Aggregate	Aggregate	Gasoline	1259.436
San Bernardino	2027	SBUS	Aggregate	Aggregate	Gasoline	581.0989
San Bernardino	2027	UBUS	Aggregate	Aggregate	Gasoline	134.4063

Row Labels	Sum of Fuel Consumption	Annual Consumption
Diesel	622.6512003	227,267,688
Gasoline	1225.992425	447,487,235
<b>Grand Total</b>	<b>1848.643625</b>	

**Project Construction GHG Emissions**

Activity	Annual GHG Emissions (MTCO <sub>2e</sub> )
	CO <sub>2e</sub>
Year 1	735
Year 2	483
Total Emissions	1217
<b>Total Emissions Amortized Over 30 Years</b>	<b>41</b>

Source: CalEEMod Output Sheets

**Total Project GHG Emissions**

Activity	Annual GHG Emissions (MTCO <sub>2e</sub> ) <sup>1</sup>
	CO <sub>2e</sub>
<b>Project Operation</b>	
Mobile	2458
Area	75
Energy	645
Water	31
Waste	68
Refrigeration	1
<b>Total Project Gross Operation Emissions</b>	<b>3,277</b>
<b>Project Construction</b>	
Amortized Construction Emissions	41
<b>Project Construction and Operation</b>	
<b>Project Total Emissions</b>	<b>3,318</b>
Significance Threshold	3,000
<b>Threshold Exceeded?</b>	<b>No</b>

Notes: 1. Numbers may vary due to rounding.

Source: CalEEMod Output Sheets

Equation	$(kW_{pv}) = (CAF \times A) / 1000 + (Ndwell \times B)$
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kW <sub>pv</sub>	Size of PV system
CAF	Conditioned floor area (without garage)
Ndwell	Number of dwelling units
A	CAF Adjustent factor
B	Dwelling Unit Adjustent Factor

Pioneer Park Data Outputs	
kW <sub>pv</sub> -Single Family	422,586.12
kW <sub>pv</sub> -Apartment Low Rise	10,374,735
Hours per day	8
DC to AC power loss	1.2
Number of Days	365
kW <sub>pv</sub> per year-Single Family	102,829,289.2
kW <sub>pv</sub> per year-Apartment Low Rise	25,245,188.5

Source: Appendix A Air Quality, Greenhouse Gas, and Energy Analysis-Tentative Tract Map No. 38237 Discovery Residential-Moreno Valley (Energy Usage-Page 41)  
[Appendix A Air Quality, Greenhouse Gas, and Energy Analysis.pdf](#)

Project Assumption		
	Dwelling Unit	Area (SF)
Single Family	275	555,600
Apartment Low Rise	7	8,050
CFA-Single Family*		55560
CFA-Apartment Low Rise*		805

\*10 percent of Lot area as garage area is not available for this project  
 Note: CFA = Conditioned Floor Area. Values with \* indicate per-unit average CFA.

Projected Operational GHG Emissions With and Without Solar		
Scenario	Without solar	With Solar
Operational GHG Emissions (MTCO <sub>2</sub> e/year)	3512	3277
Net Reduction		235

**Fleet Mix**

Land Use Subtype	HHD	LDA	LDT1	LDT2	LHD1	LHD2	MCY	MDV	MH	MHD	OBUS	SBUS	UBUS	Total
CalEEMod default	0.924704	48.18853	4.100928	24.77305	2.78405	0.730755	2.259754	14.63827	0.271332	1.119368	0.082574	0.065283	0.061403	100

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Passenger	
LDA	0.481885
LDT1	0.041009
LDT2	0.24773
MCY	0.022598
MDV	0.146383
Sum	0.939605
Trucks	
LHD1	0.02784
LHD2	0.007308
MHD	0.011194
HHD	0.009247
Sum	0.055589

0.995194

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ATTACHMENT C – DEMOLITION CALCULATION SHEET

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# 26-031 Woods Avenue Residential Norwalk

## Estimates of Demolition Debris

### Building Demolition

Building	Height(ft)	Area (ft2)	Volume (ft3)	Demo Building Volume (cy)
1	14		0	0
			0	0
			0	0
			0	0
Total		0	0	0

Weight of the Building Demolition Debris (ton/cy): 0.5

**Total Weight of Building Debris** **0** tons  
Tons

Note 1: Total square footage of existing school buildings contained in the project description

Note 2: FEMA Debris Estimating Field Guide, FEMA 329. September 2010

Note 3: CalEEMod User Guide

### Hardscape Demolition

Weight of Hardscape 145 lb/ft3

	Area	Height (ft)	Area (ft2)	Volume (cf)	Weight (lbs)	Weight (tons)
Asphalt	1	0.5	62,008	31004	4495552	2248
<b>Total</b>			<b>62007.61</b>	<b>31004</b>	<b>4495552</b>	<b>2248</b>

**Total Demolition Weight** **2248 tons**

Asphalt Area

0

62,008

