November 8, 2024

Mr. Bo Thiara
AFTON ROAD LLC
121 Chapel Drive
Mill Valley, California 94941

RE: Baker Fuel Facility Air Quality and Greenhouse Gas Modeling Update Memorandum

Dear Mr. Thiara:

INTRODUCTION

The firm of KW Air Quality & Noise LLC. is pleased to provide this air quality and greenhouse gas emissions modeling update memorandum for the Baker Fuel Facility project, located at Afton Road/I-15 in the County of San Bernardino. A vicinity map showing the project location is provided on Figure 1. To assist the reader with terms unique to air quality, a definition of terms has been provided in Appendix A.

PROJECT DESCRIPTION

The applicant is proposing to transform the under-utilized Afton Canyon Road exit on I-15 with a state-of-the-art, full-spectrum travel center that will provide services such as refueling for cars, RVs, buses and trucks, a large convenience food store, quick service restaurants and extensive restroom facilities on approximately 11.4 acres. The auto fueling canopy will have a capacity for 24 fueling positions and the truck fueling canopy 6 fueling positions. The food store and restaurants will comprise approximately 18,000 square feet across 3 buildings. In addition to electric vehicle recharging, the applicant is proposing a solar field comprising approximately 15 acres with 2,000 KW of photovoltaic power production and 50,000 Amp hours of battery bank storage. The site will also include a caretaker dwelling unit of 1,200 square feet.

The site was once the location for a Stuckey's restaurant, a convenience food store, a caretaker dwelling unit and a gas station. Also included at the site were a high-rise sign and a billboard. The proposed project site plan is illustrated on Figure 2.

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT (MDAQMD) SIGNIFICANCE CRITERIA

Table 1 shows the MDAQMD air quality significance thresholds for project-level analyses.

The following includes, but is not limited to, the MDAQMD rules that are applicable to the proposed project:

- Rule 201 (Permit to Construct) - requires written authorization to build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants. With respect to the proposed project, this rule would apply to any stationary equipment that is not otherwise exempt from this rule as an insignificant source of air pollutants (see Rule 219).

- Rule 203 (Permit to Operate) - requires written authorization to operate any equipment, the use of which may cause the issuance of air pollutants, or the use of which may reduce or control the issuance of air contaminants. With respect to the proposed project, this rule would apply to any stationary equipment that is not otherwise exempt from this rule as an insignificant source of air pollutants (see Rule 219).

- Rule 219 (Equipment Not Requiring A Written Permit Pursuant to Regulation II) - specifies stationary sources that the MDAQMD considers to be insignificant sources of air pollutants that are exempt from Rules 201 and 202. With respect to the proposed project, the following sources would be exempt from permit requirements:

    - Comfort air conditioning or ventilating systems which are not designed or used to remove air contaminants generated by, or released from, specific equipment units;
    - Space heaters;
    - Equipment used exclusively for steam cleaning;

- Rule 402 (Nuisance) - This rule specifies that a person may 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.

- Rule 403.2 (Fugitive Dust Control for the Mojave Desert Planning Area) - This rule requires owners or operators of a construction or demolition fugitive dust source to implement the fugitive dust control measures listed in Rule 403.2. These measures include periodic watering for short-term stabilization of disturbed surface area to minimize visible dust emissions, stabilization of graded surfaces if no development is planned within 30 days, reducing non-essential earth moving activity under high wind conditions, and more. In addition, for sites over 100 acres such as the proposed project, the control measures in Rule 403.2 must also be implemented. The additional control measures include preparing and submitting a dust control plan to the MDAQMD prior to commencing earth-moving activities. The dust control plan must describe all applicable dust control measures that will be implemented at the project site. Other additional control measures to minimize visible fugitive dust for sites over 100 acres include stabilizing access routes, maintaining natural topography to the extent possible, and constructing paved roads and parking lots first where feasible.

- Rule 1113 (Architectural Coatings) - This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

- Rule 1160 (Internal Combustion Engines) - This rule establishes limits for VOC, NOx, and CO emissions associated with stationary internal combustion engines. However, the provisions of the rule do not apply to the following engines:

    - All internal combustion engines rated at less than 500 brake horsepower;
    - All internal combustion engines operated less than 100 hours within any continuous four consecutive calendar quarter period; and
    - Emergency internal combustion engines.

Regulation XIII (New Source Review) - For new and modified stationary sources subject to permitting requirements (see Rule 201), this series of rules prescribes the use of Best Available Control Technology and the provision of emission offsets (i.e., mitigation) for equipment whose emissions exceed specified thresholds. The applicability of these requirements would be determined upon submittal of an application for permit to construct under Rule 201.

To assist in the establishment of a quantitative determination of what is considered "significant," the MDAQMD has published significance thresholds that apply to new projects constructed or operated within the MDAQMD.

Thresholds. The MDAQMD recommends that lead agencies apply these thresholds in determining whether a proposed project would result in a significant air quality impact. If the lead agency finds that a proposed project has the potential to exceed these air pollution thresholds, the project would be considered significant. The MDAQMD has defined thresholds for NOx, VOC, SOx, CO, and PM10, hereinafter referred to as "criteria" pollutants, and for health risk in terms of cancer and non-cancer risk (MDAQMD 2009). Any project is significant if it:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 6; and/or

2. Generates a violation of any ambient air quality standard when added to the local background*; and/or

3. Does not conform with the applicable attainment or maintenance plan(s)*[1]; and/or

4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in one million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to one*.

*These significance thresholds are not applicable to all projects. In general, the emissions comparison (criteria number 1) is sufficient.

An air quality, greenhouse gas emissions, and health risk analysis report was prepared previously by Kunzman Associates, Inc. (Baker Fuel Facility, Air Quality, Global Climate Change, and Health Risk Assessment Impact Analysis, May 18, 2016). However, due to the age of the report, the County of San

[1] A project is deemed to not exceed this threshold, and hence not be significant, if it is consistent with the existing land use plan. Zoning changes, specific plans, general plan amendments and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to not exceed this threshold.

Bernardino requested that the project applicant provide an updated CalEEMod analysis of the project, using the latest version of CalEEMod. The findings of the that updated analysis are provided below.

SHORT-TERM AIR QUALITY CONSTRUCTION IMPACTS

Construction activities associated with the proposed project would have the potential to generate air pollutant emissions. Assumptions for the phasing, duration, and required equipment for the construction of the proposed project were obtained from the project applicant. The original Kunzman analysis used the year 2017 for the construction analysis; however, to be consistent with the latest traffic analysis, the year 2023 was used for the construction analysis in this report.

The construction activities for the proposed project are anticipated to include: grading of approximately 11.41 acres; construction of a 5-unit caretaker residence, 4,445 square feet (SF) of fast-food restaurant with drive-through, 13,700 SF of convenience store/coffee shop with gas pumps (24 fueling positions and 17 alternative fuel charging station positions), and landscaping of approximately 133,070 square feet, paving of a 125-space parking lot covering 343,660 SF, and application of architectural coatings. See Appendix B for more details.

The proposed project is anticipated to start construction no sooner than May 2021 be completed by mid-December 2022. The project will be operational in 2022.

Methodology

The following provides a discussion of the methodology used to calculate regional construction air emissions and an analysis of the proposed project's short-term construction emissions for the criteria pollutants. The construction-related regional air quality impacts have been analyzed for both criteria pollutants and GHGs.

Emissions are estimated using the CalEEMod (Version 2016.3.2) software, which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California. Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.

Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The input values used in this analysis were adjusted to be project-specific for the construction schedule and the equipment used was based on CalEEMod defaults. The CalEEMod program uses the EMFAC2021 computer program to calculate the emission rates specific for the MDAQMD portion of San Bernardino County for construction-related employee vehicle trips and the OFFROAD2017 computer program to calculate emission rates for heavy truck operations. EMFAC2021 and OFFROAD2017 are computer programs generated by CARB that calculates composite

emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Daily truck trips and CalEEMod default trip length data were used to assess roadway emissions from truck exhaust. The maximum daily emissions are estimated values for the worst-case day and do not represent the emissions that would occur for every day of project construction. The maximum daily emissions are compared to the MDAQMD daily regional numeric indicators. Detailed construction equipment lists, construction scheduling, and emission calculations are provided in Appendix B.

Per MDAQMD Rule 1113 as amended on April 23, 2012, the architectural coatings that would be applied after January 1, 2013 will be limited to an average of 150 grams per liter or less.

The phases of the construction activities which have been analyzed below for each phase are: (1) demolition, (2) grading, (3) construction, (4) paving, and (5) application of architectural coatings. The construction, painting and paving phases were assumed to overlap and the maximum construction emissions reflect this. Details pertaining to the project's construction timing and the type of equipment modeled for each construction phase are available in the CalEEMod output in Appendix B.

Construction-Related Impacts

The maximum summer or winter criteria pollutant emissions from the proposed project's construction-related criteria pollutant emissions are shown below in Table 2. Table 2 shows that none of the analyzed criteria pollutants would exceed the MDAQMD daily emissions thresholds. Therefore, a less than significant air quality impact would occur from construction of the proposed project.

LONG-TERM OPERATIONAL EMISSIONS

The operation of the proposed project would result in a long-term increase in air quality pollutant emissions. This increase would be due to emissions from the project-generated vehicle trips and through operational emissions from the on-going use of the proposed project. The following section provides an analysis of potential long-term air quality impacts due to the on-going operations of the proposed project.

Operations-Related Criteria Pollutants Analysis

The air quality impacts created by vehicle trips associated with the proposed project have been analyzed by inputting the project-generated vehicular trips from the Baker Fuel Facility Circulation Assessment (TIA) (prepared by Ganddini Group, Inc., April 13, 2022), for year 2023 into the CalEEMod Model. The TIA found that "the proposed project will generate a total of 7,804 trips; however, the TIA noted that this facility is completely isolated and adjacent to the I-15 Freeway. The site is so remote that the staff will live on-site. Patrons of the facility will likely stop at the facility to fuel their vehicle and obtain food as they travel past the site along the I-15 Freeway. It is projected that the site adds virtually no new traffic to the adjacent I-15 Freeway." Using the internal capture rates and diverted link rates, the total traffic generated and added to the freeway mainline was 336. With the incorporation of the internal capture rates and diverted link rates, the trip generation rate for the caretaker apartments was 5 trips/DU. The trip generation rate for the fast-food restaurant with drive through was 5.85 trips/TSF and the trip generation rate for the convenience store/coffee shop with gas pumps was 6.95 trips/pump (including the alternative fuel

charging stations). The output from the CalEEMod model is provided in Appendix B.

The CalEEMod model has standardized emission rates for electrical usage, natural gas appliances, landscape maintenance equipment, and architectural coatings. The program then multiplies these rates by the number of square feet proposed for the project being analyzed.

Per MDAQMD Rule 1113 as amended on April 23, 2012, the architectural coatings that would be applied after January 1, 2014 will be limited to an average of 150 grams per liter or less.

The annual VOC, NOx, CO, SO_x, PM10, and PM2.5 emissions created from the proposed project's long-term operations have been calculated and are summarized below in Table 3. The data provided in Table 3 shows that none of the analyzed criteria pollutants would exceed the above mentioned MDAQMD emissions thresholds. Therefore, operation of the proposed project would not create a significant regional impact from operational emissions.

GREENHOUSE GAS ANALYSIS

The proposed project is anticipated to generate GHG emissions from construction and operational activities. The following provides the methodology used to calculate the GHG emissions and discusses the impacts.

Methodology

The proposed project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste, water, and construction equipment. The following provides the methodology used to calculate the project related GHG emissions and the project impacts.

CalEEMod Version 2022.1.1.28 was used to calculate the GHG emissions from the proposed project. The CalEEMod Output for year 2023 is available in Appendix B. The construction-related GHG emissions were also included in the analysis and were based on a 30-year amortization rate as recommended in the SCAQMD GHG Working Group meeting on November 19, 2009.

Greenhouse Gas Emissions

The GHG emissions have been calculated based on the parameters described above. A summary of the results is shown below in Table 4 and the CalEEMod Model run for the proposed project is provided in Appendix B. Table 3 shows that the total for the proposed project would result in annual emissions of 2,121.32 MTCO2e, and 13,734.78 lbs/day, and do not exceed the MDAQMD annual threshold of 100,000 MTCO2e or the daily threshold of 548,000 lbs/day.

According to the MDAQMD thresholds of significance established above, a cumulative global climate change impact would occur if the GHG emissions created from the on-going operations would exceed 100,000 MTCO2e per year and 548,000 pounds per year of CO2e. Therefore, as the project's total emissions do not exceed either 100,000 MTCO2e per year or 548,000 pounds per year of CO2e, operation of the proposed project would not create a significant cumulative impact to global climate change.

Mr. Bo Thiara
AFTON ROAD LLC
November 8, 2024

Greenhouse Gas Plan Consistency

The County of San Bernardino adopted the GHG Reduction Plan Update in June 2021. The GHG Reduction Plan Update provides guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County of San Bernardino. The County includes a GHG Development Review Process (DRP) that specifies a two-step approach in quantifying GHG emissions. First, a screening threshold of 3,000 MTCO2e/yr is used to determine if additional analysis is required. Projects that exceed the 3,000 MTCO2e/yr will be required to either achieve a minimum 100 points per the Screening Tables or a 31% reduction over 2007 emissions levels. Consistent with CEQA guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.

As discussed above, the project would generate 2,121.32 MTCO2e/year of GHG emissions; therefore, the project will not exceed the GHG Reduction Plan's screening threshold of 3,000 MTCO2/year.

The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases and impacts are considered to be less than significant.

CONCLUSIONS

As discussed above, the proposed project would not exceed MDAQMD thresholds for construction or operation-related emissions. The project would not generate a significant amount of GHGs and would not have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Therefore, this technical memorandum found that air quality and greenhouse gas impacts are considered to be less than significant. No further analysis or mitigation is required.

It has been a pleasure for KW Air Quality & Noise LLC to service your needs on the Baker Fuel Facility project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (951) 212-3277.

Respectfully submitted,

Katie Wilson

Katie Wilson, M.S.
Senior Air Quality Analyst and CEO.

Table 1
MDAQMD Air Quality Significance Thresholds

Pollutant	Annual Thresholds (tons/year)	Daily Thresholds (lbs/day)
NOx	25	137
VOC	25	137
PM10	15	82
PM2.5	12	65
SOx	25	137
CO	100	548
H_2S	10	54
Lead	0.6	3
Greenhouse Gases (CO2e)	100,000	548,000

Source: https://www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638591628485540147

Table 2
Construction-Related Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	ROG	NOx	CO	SO_2	PM10	PM2.5
Maximum Daily Emissions[1,2]	22.29	37.43	32.73	0.06	5.45	2.95
MDAQMD Thresholds	137	137	548	137	82	65
Exceeds Thresholds?	No	No	No	No	No	No

Notes:

Source: CalEEMod Version 2022.1.1.28

(1) Includes on-site and off-site emissions. On-site demolition and grading PM-10 and PM-2.5 emissions show compliance with MDAQMD Rule 403 for fugitive dust.

(2) Construction, painting and paving phases may overlap.

Table 3
Operational Pollutant Emissions

Activity	Pollutant Emissions (tons/year)					
	ROG	NOx	CO	SO2	PM10	PM2.5
Maximum Annual Emissions	0.57	0.93	6.10	0.02	1.30	0.34
MDAQMD Annual Thresholds	25	25	100	25	15	12
Exceeds Threshold?	No	No	No	No	No	No

Notes:

Source: CalEEMod Version 2022.1.1.28; annual (max).

Table 4
Project-Related Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)						(lbs/day)
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e	CO2e
Maximum Annual Operations	7.59	1,594.40	1,602.00	0.78	0.07	2,115.20	13,505.00
Construction[1]	0.00	6.08	6.08	0.00	0.00	6.12	229.78
Total Emissions	7.59	1,600.48	1,608.08	0.78	0.07	2,121.32	13,734.78
MDAQMD GHG Thresholds						100,000	548,000
Exceeds Threshold?						No	No

Notes:

Source: CalEEMod Version 2022.1.1.28 for Opening Year 2023.

(1) Construction GHG emissions CO2e based on a 30-year amortization rate.

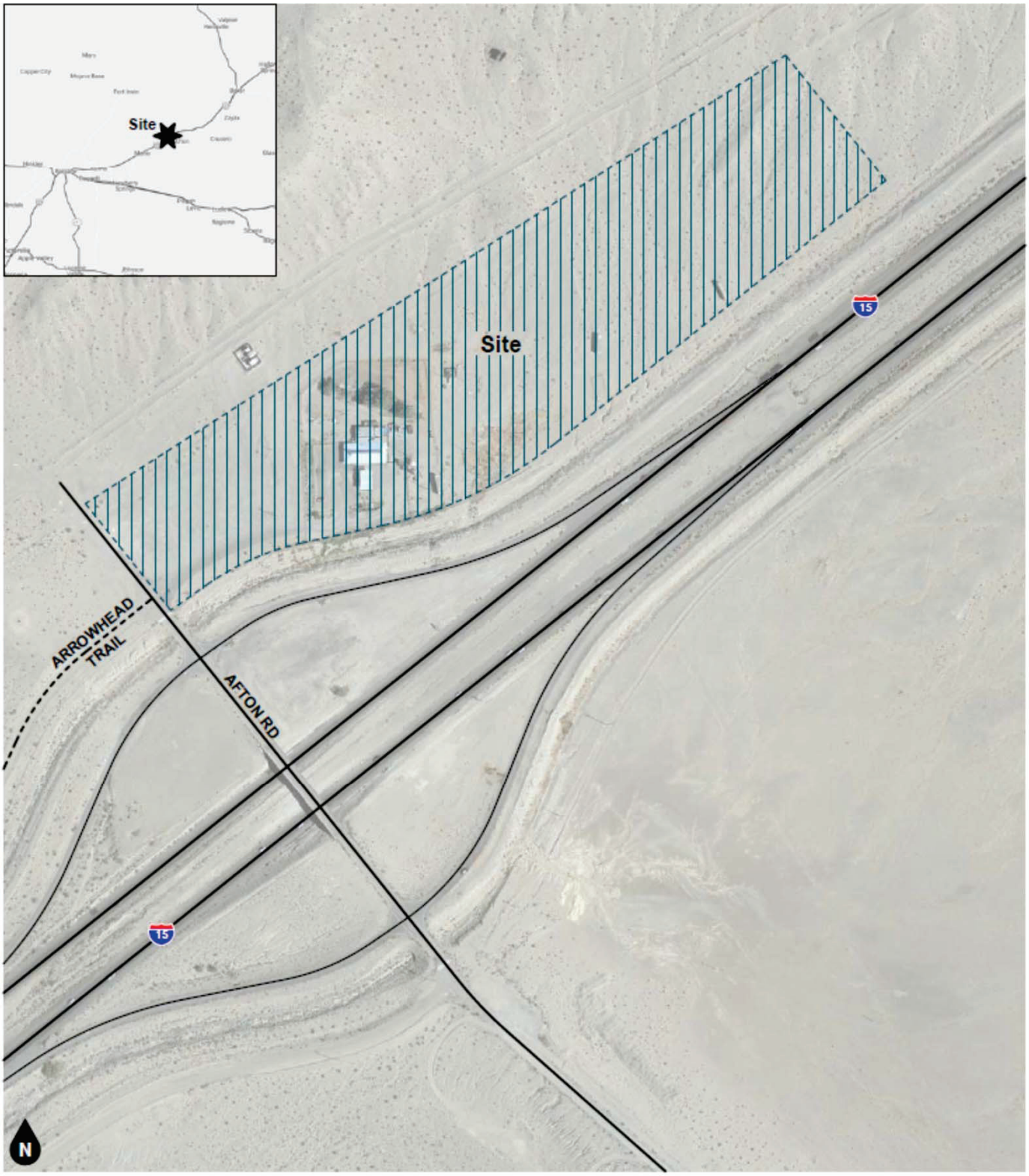
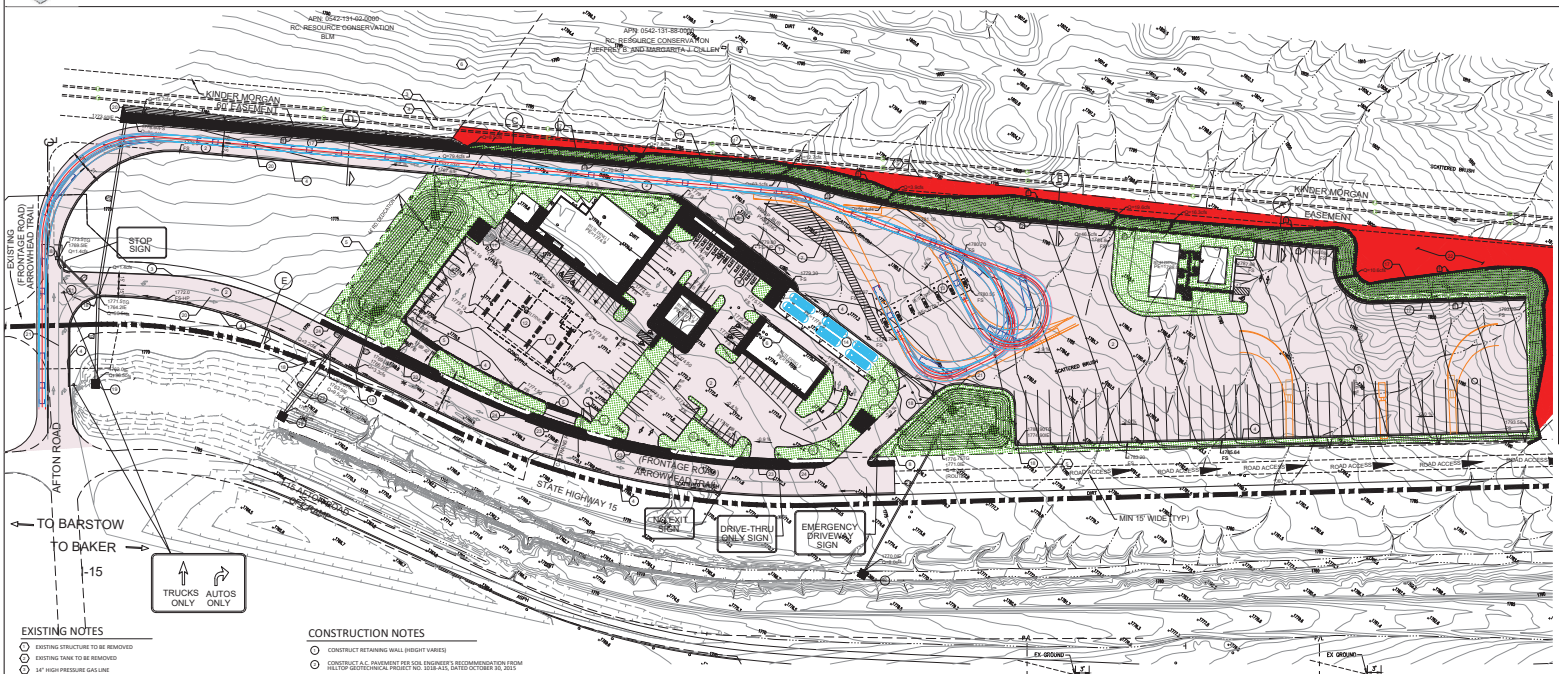


Figure 1
Project Location Map

Baker Fuel Facility
Air Quality and Greenhouse Gas Modeling Update Memorandum

Source: Ganddini Circulation Assessment (2022)

SAN BERNARDINO COUNTY CONDITIONAL USE PERMIT 2020-00139



EXISTING NOTES

1. EXISTING STRUCTURE TO BE REMOVED
2. EXISTING TANK TO BE REMOVED
3. 14" HIGH PRESSURE GAS LINE
4. 8" HIGH PRESSURE GAS LINE
5. EXISTING PROPERTY LINE
6. EXISTING TELEPHONE SERVICE BUILDINGS

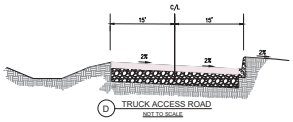
CONSTRUCTION NOTES

1. CONSTRUCT RETAINING WALL (HEIGHT VARIES)
2. CONSTRUCT A.C. PAVEMENT PER SOIL ENGINEER'S RECOMMENDATION FROM HILLTOP GEOTECHNICAL PROJECT NO. 3218-A1S, DATED OCTOBER 20, 2015
3. CONSTRUCT 6" CONCRETE CURB ONLY
4. CONSTRUCT 6" CONCRETE CURB AND GUTTER
5. CONSTRUCT CONCRETE RIBBON GUTTER
6. CONSTRUCT 4" THICK CONCRETE WALKWAY
7. PAINTED STRIPING
8. INSTALL SIGNAGE
9. INSTALL ELECTRIC CAR CHARGING STATION
10. CONSTRUCT REMOVABLE BOLLARDS
11. CONSTRUCT TRASH ENCLOSURE
12. CONSTRUCT AUTO FUELING PUMP (TYPICAL)
13. CONSTRUCT TRUCK FUELING PUMP (TYPICAL)
14. CONSTRUCT UNDERGROUND FUEL STORAGE TANKS
15. CONSTRUCT 25,000 GAL WATER STORAGE TANK
16. INSTALL ENHANCED DESERT LANDSCAPING
17. CONSTRUCT CONCRETE CH.ANNEL. SEE STORM DRAIN DATA TABLE
18. CONSTRUCT TYPE "A" CATCH BASIN
19. CONSTRUCT RIP-RAP
20. PAINT 4" YELLOW CENTERLINE
21. PAINT 8" WHITE LANE LINE
22. INSTALL NATIVE LANDSCAPING
23. CONSTRUCT DRIVEWAY APPROACH PER COUNTY STANDARD 129B AND LOCATED PER COUNTY STANDARD 130
24. CONSTRUCT SIDEWALK PER COUNTY STANDARD 109 TYPE "C"

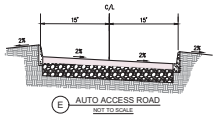
GRAPHIC SCALE: 1" = 50'

STORM DRAIN DATA (PVT)

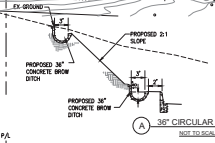
	REMARKS
1	36" CONCRETE BROW DITCH @ 1% (MIN)
2	3'X2' RECTANGULAR CONCRETE CHANNEL @ 1% (MIN)
3	5'X2' RECTANGULAR CONCRETE CHANNEL @ 0.5% (MIN)
4	4' TRAPEZOIDAL CONCRETE CHANNEL @ 0.5% (MIN)
5	30" RCP SCH 1OR-35 @ 4%
6	30" RCP SCH 1OR-35 @ 2%
7	24" RCP SCH 1OR-35 @ 7.7%
8	18" RCP SCH 1OR-35 @ 0.5%
9	24" RCP SCH 1OR-35 @ 0.5%
10	18" RCP SCH 1OR-35 @ 0.6%
11	18" RCP SCH 1OR-35 @ 0.6%
12	18" PVC SCH 1OR-35 @ 1.8%
13	12" PVC SCH 1OR-35 @ 3.5%
14	12" PVC SCH 1OR-35 @ 6.5%



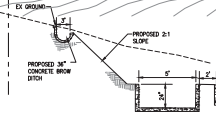
D TRUCK ACCESS ROAD
NOT TO SCALE



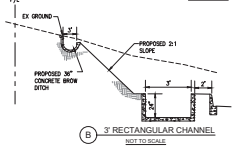
E AUTO ACCESS ROAD
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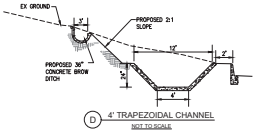
A 36" CIRCULAR DITCH
NOT TO SCALE



C 5' RECTANGULAR CHANNEL
NOT TO SCALE



B 3' RECTANGULAR CHANNEL
NOT TO SCALE



D 4' TRAPEZOIDAL CHANNEL
NOT TO SCALE

K&S ENGINEERING, INC.
Planning . Engineering . Surveying
7801 Mission Center Court, Suite 100 San Diego, CA 92108
(619) 296-5905 Fax: (619) 296-5564

SUBMITTAL / REVISIONS

No.	Description	Date
01	STORM DATA DATA	11/10/2020
02	ADDITION OF PARKING/REVISE LAND USE TABLE	05/06/2021
03	ADDITION OF PV POWER PRODUCTION FACILITY C3-C5	07/14/2023
04	ACCESS ROAD TURN AROUND D2 & C3	12/08/2023

Issue Date: 05/06/2020
Scale: As indicated
K&S Project Number: 20-018

BENCH MARK:
CCSD7 ELEV 1810.11 METAL ROD ALONG INTERSTATE 15 SOUTHBOUND SHOULDER, 0.1 NE AFTON ROAD OVERPASS, 0.15 MILES NE OF MILEPOST 1-92, AND 33 FT NW OF TAE C.L. OF THE SOUTH BOUND TRAFFIC.

CONDITIONAL USE PERMIT
45307 AFTON ROAD, BAKER, CA 92309
APN: 0542-131-87

SHEET TITLE: Figure 2
SITE PLAN
COUNTY FILE NO.: PROJ-2020-00139
C2

K & S ENGINEERING 04-15-2024

APPENDIX A

GLOSSARY OF TERMS

AQMP	Air Quality Management Plan
BACT	Best Available Control Technologies
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HIDPM	Hazard Index Diesel Particulate Matter
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
LCFS	Low Carbon Fuel Standard
MDAQMD	Mojave Desert Air Quality Management District
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
ROG	Reactive organic gases (see VOC)
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds

APPENDIX B

CALEEMOD MODEL EMISSIONS PRINTOUTS

Baker Fuel Facility Detailed Report

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3.7. Paving (2023) - Unmitigated

3.9. Architectural Coating (2023) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated
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. Biomass Cover Type
5.18.1.1. Unmitigated
5.18.2. Sequestration
5.18.2.1. Unmitigated
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

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Baker Fuel Facility
Construction Start Date	1/2/2023
Operational Year	2023
Lead Agency	County of San Bernardino
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	5.00
Precipitation (days)	8.20
Location	35.07313871862094, -116.41202503831502
County	San Bernardino-Mojave Desert
City	Unincorporated
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5139
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Low Rise	5.00	Dwelling Unit	0.31	4,180	0.00	—	17.0	—

Fast Food Restaurant with Drive Thru	4.45	1000sqft	0.10	4,445	31,200	—	—	—
Convenience Market with Gas Pumps	41.0	Pump	0.13	13,700	101,870	—	—	—
Parking Lot	125	Space	10.9	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	22.3	21.1	27.0	0.04	1.00	0.38	1.38	0.92	0.09	1.01	—	4,566	4,566	0.18	0.06	2.03	4,591
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.83	37.4	32.7	0.06	1.59	3.85	5.45	1.47	1.49	2.95	—	6,867	6,867	0.28	0.23	0.09	6,893
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.32	5.38	5.81	0.01	0.24	0.23	0.47	0.22	0.08	0.30	—	1,102	1,102	0.04	0.02	0.17	1,109
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.98	1.06	< 0.005	0.04	0.04	0.09	0.04	0.01	0.05	—	183	183	0.01	< 0.005	0.03	184

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	22.3	21.1	27.0	0.04	1.00	0.38	1.38	0.92	0.09	1.01	—	4,566	4,566	0.18	0.06	2.03	4,591
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.83	37.4	32.7	0.06	1.59	3.85	5.45	1.47	1.49	2.95	—	6,867	6,867	0.28	0.23	0.09	6,893
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.32	5.38	5.81	0.01	0.24	0.23	0.47	0.22	0.08	0.30	—	1,102	1,102	0.04	0.02	0.17	1,109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.24	0.98	1.06	< 0.005	0.04	0.04	0.09	0.04	0.01	0.05	—	183	183	0.01	< 0.005	0.03	184

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.52	4.64	42.9	0.09	0.16	7.11	7.26	0.15	1.80	1.95	56.4	10,331	10,387	4.75	0.38	2,886	13,505
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.08	5.00	30.9	0.08	0.16	7.11	7.26	0.15	1.80	1.95	56.4	9,510	9,567	4.75	0.40	2,848	12,651
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	3.13	5.11	33.4	0.08	0.10	7.01	7.12	0.10	1.78	1.88	45.9	9,630	9,676	4.69	0.40	2,864	12,776
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.57	0.93	6.10	0.02	0.02	1.28	1.30	0.02	0.32	0.34	7.59	1,594	1,602	0.78	0.07	474	2,115

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.72	4.41	41.0	0.09	0.07	7.11	7.18	0.07	1.80	1.87	—	9,051	9,051	0.26	0.36	38.7	9,203
Area	0.79	0.02	1.72	< 0.005	0.07	—	0.07	0.07	—	0.07	13.6	4.00	17.6	0.07	< 0.005	—	19.4
Energy	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,253	1,253	0.12	0.01	—	1,260
Water	—	—	—	—	—	—	—	—	—	—	3.81	22.9	26.7	0.39	0.01	—	39.3
Waste	—	—	—	—	—	—	—	—	—	—	39.0	0.00	39.0	3.90	0.00	—	136
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,847	2,847
Total	3.52	4.64	42.9	0.09	0.16	7.11	7.26	0.15	1.80	1.95	56.4	10,331	10,387	4.75	0.38	2,886	13,505
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.43	4.78	30.0	0.08	0.07	7.11	7.18	0.07	1.80	1.87	—	8,234	8,234	0.27	0.37	1.00	8,353
Area	0.64	0.01	0.65	< 0.005	0.07	—	0.07	0.06	—	0.06	13.6	0.00	13.6	0.07	0.00	—	15.4
Energy	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,253	1,253	0.12	0.01	—	1,260
Water	—	—	—	—	—	—	—	—	—	—	3.81	22.9	26.7	0.39	0.01	—	39.3
Waste	—	—	—	—	—	—	—	—	—	—	39.0	0.00	39.0	3.90	0.00	—	136
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,847	2,847
Total	3.08	5.00	30.9	0.08	0.16	7.11	7.26	0.15	1.80	1.95	56.4	9,510	9,567	4.75	0.40	2,848	12,651
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	2.44	4.88	32.6	0.08	0.07	7.01	7.08	0.07	1.78	1.85	—	8,352	8,352	0.27	0.38	16.6	8,488
Area	0.67	0.01	0.67	< 0.005	0.02	—	0.02	0.02	—	0.02	3.05	1.97	5.03	0.02	< 0.005	—	5.45
Energy	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,253	1,253	0.12	0.01	—	1,260
Water	—	—	—	—	—	—	—	—	—	—	3.81	22.9	26.7	0.39	0.01	—	39.3
Waste	—	—	—	—	—	—	—	—	—	—	39.0	0.00	39.0	3.90	0.00	—	136
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,847	2,847
Total	3.13	5.11	33.4	0.08	0.10	7.01	7.12	0.10	1.78	1.88	45.9	9,630	9,676	4.69	0.40	2,864	12,776
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.45	0.89	5.95	0.01	0.01	1.28	1.29	0.01	0.32	0.34	—	1,383	1,383	0.04	0.06	2.75	1,405
Area	0.12	< 0.005	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.51	0.33	0.83	< 0.005	< 0.005	—	0.90
Energy	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	207	207	0.02	< 0.005	—	209
Water	—	—	—	—	—	—	—	—	—	—	0.63	3.78	4.41	0.06	< 0.005	—	6.51
Waste	—	—	—	—	—	—	—	—	—	—	6.46	0.00	6.46	0.65	0.00	—	22.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	471	471
Total	0.57	0.93	6.10	0.02	0.02	1.28	1.30	0.02	0.32	0.34	7.59	1,594	1,602	0.78	0.07	474	2,115

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.84	27.3	23.5	0.03	1.20	—	1.20	1.10	—	1.10	—	3,425	3,425	0.14	0.03	—	3,437

Demoliti	—	—	—	—	—	1.07	1.07	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.37	0.32	< 0.005	0.02	—	0.02	0.02	—	0.02	—	46.9	46.9	< 0.005	< 0.005	—	47.1
Demoliti on	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.77	7.77	< 0.005	< 0.005	—	7.79
Demoliti on	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	0.99	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	202	202	0.01	0.01	0.02	204
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.52	0.32	0.01	0.02	0.32	0.35	0.02	0.08	0.11	—	1,263	1,263	< 0.005	0.20	0.07	1,321
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.85	2.85	< 0.005	< 0.005	0.01	2.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.3	17.3	< 0.005	< 0.005	0.02	18.1

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.86	2.86	< 0.005	< 0.005	< 0.005	3.00

3.3. Grading (2023) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.72	37.3	31.4	0.06	1.59	—	1.59	1.47	—	1.47	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.53	1.29	< 0.005	0.07	—	0.07	0.06	—	0.06	—	271	271	0.01	< 0.005	—	272
Dust From Material Movement	—	—	—	—	—	0.15	0.15	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.28	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.9	44.9	< 0.005	< 0.005	—	45.0
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.13	1.32	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	269	269	0.01	0.01	0.03	272
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.4	11.4	< 0.005	< 0.005	0.02	11.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.89	1.89	< 0.005	< 0.005	< 0.005	1.91
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2023) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.85	3.18	0.01	0.13	—	0.13	0.12	—	0.12	—	578	578	0.02	< 0.005	—	580
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.52	0.58	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.7	95.7	< 0.005	< 0.005	—	96.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.97	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	150	150	0.01	< 0.005	0.63	152
Vendor	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	< 0.005	0.02	0.31	121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.07	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	133	133	0.01	< 0.005	0.02	134
Vendor	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	< 0.005	0.02	0.01	121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.18	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.9	32.9	< 0.005	< 0.005	0.07	33.4
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.9	27.9	< 0.005	< 0.005	0.03	29.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.45	5.45	< 0.005	< 0.005	0.01	5.52
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.62	4.62	< 0.005	< 0.005	0.01	4.81
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2023) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.06	0.51	0.63	< 0.005	0.03	—	0.03	0.02	—	0.02	—	95.3	95.3	< 0.005	< 0.005	—	95.6
Paving	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	1.47	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	228	228	0.01	0.01	0.96	232
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.1	13.1	< 0.005	< 0.005	0.03	13.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.17	2.17	< 0.005	< 0.005	< 0.005	2.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2023) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.93	1.15	< 0.005	0.04	—	0.04	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	18.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.76	4.76	< 0.005	< 0.005	—	4.77
Architectural Coatings	0.66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.79	0.79	< 0.005	< 0.005	—	0.79
Architectural Coatings	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.19	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.0	30.0	< 0.005	< 0.005	0.13	30.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.97	0.97	< 0.005	< 0.005	< 0.005	0.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

Apartme Low Rise	0.17	0.22	2.06	< 0.005	< 0.005	0.35	0.35	< 0.005	0.09	0.09	—	441	441	0.01	0.02	1.88	449
Fast Food Restaurant with Drive Thru	0.21	0.35	3.26	0.01	0.01	0.57	0.57	0.01	0.14	0.15	—	720	720	0.02	0.03	3.08	732
Convenience Market with Gas Pumps	2.33	3.83	35.7	0.08	0.06	6.20	6.26	0.06	1.57	1.63	—	7,889	7,889	0.23	0.31	33.8	8,022
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.72	4.41	41.0	0.09	0.07	7.11	7.18	0.07	1.80	1.87	—	9,051	9,051	0.26	0.36	38.7	9,203
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.15	0.24	1.53	< 0.005	< 0.005	0.35	0.35	< 0.005	0.09	0.09	—	402	402	0.01	0.02	0.05	408
Fast Food Restaurant with Drive Thru	0.19	0.38	2.38	0.01	0.01	0.57	0.57	0.01	0.14	0.15	—	655	655	0.02	0.03	0.08	664
Convenience Market with Gas Pumps	2.09	4.16	26.1	0.07	0.06	6.20	6.26	0.06	1.57	1.63	—	7,177	7,177	0.23	0.33	0.88	7,281
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.43	4.78	30.0	0.08	0.07	7.11	7.18	0.07	1.80	1.87	—	8,234	8,234	0.27	0.37	1.00	8,353
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.03	0.05	0.31	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	68.0	68.0	< 0.005	< 0.005	0.13	69.2

Fast Food Restaurant with Drive Thru	0.04	0.07	0.48	< 0.005	< 0.005	0.10	0.10	< 0.005	0.03	0.03	—	111	111	< 0.005	0.01	0.22	113
Convenience Market with Gas Pumps	0.38	0.77	5.17	0.01	0.01	1.11	1.13	0.01	0.28	0.29	—	1,204	1,204	0.04	0.05	2.39	1,223
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.45	0.89	5.95	0.01	0.01	1.28	1.29	0.01	0.32	0.34	—	1,383	1,383	0.04	0.06	2.75	1,405

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	22.4	22.4	< 0.005	< 0.005	—	22.5
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	149	149	0.01	< 0.005	—	150
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	422	422	0.04	< 0.005	—	425

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	396	396	0.04	< 0.005	—	398
Total	—	—	—	—	—	—	—	—	—	—	—	990	990	0.09	0.01	—	995
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	22.4	22.4	< 0.005	< 0.005	—	22.5
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	149	149	0.01	< 0.005	—	150
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	422	422	0.04	< 0.005	—	425
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	396	396	0.04	< 0.005	—	398
Total	—	—	—	—	—	—	—	—	—	—	—	990	990	0.09	0.01	—	995
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	3.71	3.71	< 0.005	< 0.005	—	3.73
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	24.6	24.6	< 0.005	< 0.005	—	24.8
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	69.9	69.9	0.01	< 0.005	—	70.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	65.5	65.5	0.01	< 0.005	—	65.9

Total	—	—	—	—	—	—	—	—	—	—	—	164	164	0.02	< 0.005	—	165

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.7	26.7	< 0.005	< 0.005	—	26.8
Fast Food Restaurant with Drive Thru	0.01	0.14	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	163	163	0.01	< 0.005	—	163
Convenience Market with Gas Pumps	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	74.1	74.1	0.01	< 0.005	—	74.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	264	264	0.02	< 0.005	—	264
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.7	26.7	< 0.005	< 0.005	—	26.8
Fast Food Restaurant with Drive Thru	0.01	0.14	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	163	163	0.01	< 0.005	—	163

Convenience Market with Gas Pumps	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	74.1	74.1	0.01	< 0.005	—	74.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	264	264	0.02	< 0.005	—	264
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.42	4.42	< 0.005	< 0.005	—	4.43
Fast Food Restaurant with Drive Thru	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.0	27.0	< 0.005	< 0.005	—	27.0
Convenience Market with Gas Pumps	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.3	12.3	< 0.005	< 0.005	—	12.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	43.6	43.6	< 0.005	< 0.005	—	43.8

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.06	0.01	0.65	< 0.005	0.07	—	0.07	0.06	—	0.06	13.6	0.00	13.6	0.07	0.00	—	15.4

Consumer	0.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.16	0.01	1.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.00	4.00	< 0.005	< 0.005	—	4.02
Total	0.79	0.02	1.72	< 0.005	0.07	—	0.07	0.07	—	0.07	13.6	4.00	17.6	0.07	< 0.005	—	19.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.06	0.01	0.65	< 0.005	0.07	—	0.07	0.06	—	0.06	13.6	0.00	13.6	0.07	0.00	—	15.4
Consumer Products	0.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.64	0.01	0.65	< 0.005	0.07	—	0.07	0.06	—	0.06	13.6	0.00	13.6	0.07	0.00	—	15.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.51	0.00	0.51	< 0.005	0.00	—	0.57
Consumer Products	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	< 0.005	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.33	0.33	< 0.005	< 0.005	—	0.33
Total	0.12	< 0.005	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.51	0.33	0.83	< 0.005	< 0.005	—	0.90

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	0.40	1.15	1.55	0.04	< 0.005	—	2.87
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	2.59	10.2	12.8	0.27	0.01	—	21.4
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	0.82	11.5	12.3	0.09	< 0.005	—	15.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	3.81	22.9	26.7	0.39	0.01	—	39.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	0.40	1.15	1.55	0.04	< 0.005	—	2.87
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	2.59	10.2	12.8	0.27	0.01	—	21.4

Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	0.82	11.5	12.3	0.09	< 0.005	—	15.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	3.81	22.9	26.7	0.39	0.01	—	39.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	0.07	0.19	0.26	0.01	< 0.005	—	0.47
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.43	1.69	2.12	0.04	< 0.005	—	3.54
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	0.14	1.90	2.04	0.01	< 0.005	—	2.50
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	0.63	3.78	4.41	0.06	< 0.005	—	6.51

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

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

Apartments	—	—	—	—	—	—	—	—	—	—	2.05	0.00	2.05	0.20	0.00	—	7.16
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	27.6	0.00	27.6	2.76	0.00	—	96.5
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	9.36	0.00	9.36	0.94	0.00	—	32.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	39.0	0.00	39.0	3.90	0.00	—	136
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	2.05	0.00	2.05	0.20	0.00	—	7.16
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	27.6	0.00	27.6	2.76	0.00	—	96.5
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	9.36	0.00	9.36	0.94	0.00	—	32.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	39.0	0.00	39.0	3.90	0.00	—	136
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.19

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	4.57	0.00	4.57	0.46	0.00	—	16.0
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	1.55	0.00	1.55	0.15	0.00	—	5.42
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	6.46	0.00	6.46	0.65	0.00	—	22.6

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.95	6.95
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,840	2,840
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,847	2,847

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.95	6.95
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,840	2,840
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,847	2,847
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.15	1.15
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	470	470
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	471	471

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. 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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/2/2023	1/6/2023	5.00	5.00	—
Grading	Grading	1/7/2023	1/29/2023	5.00	15.0	—
Building Construction	Building Construction	1/30/2023	5/31/2023	5.00	88.0	—

Paving	Paving	5/1/2023	5/31/2023	5.00	23.0	—
Architectural Coating	Architectural Coating	5/15/2023	5/31/2023	5.00	13.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	17.8	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	9.85	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	3.51	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	1.97	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

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	8,465	2,822	27,218	9,073	28,390

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	7,720	—
Grading	—	—	45.0	0.00	—
Paving	0.00	0.00	0.00	0.00	10.9

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Low Rise	—	0%
Fast Food Restaurant with Drive Thru	0.00	0%
Convenience Market with Gas Pumps	0.00	0%
Parking Lot	10.9	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Low Rise	25.0	25.0	25.0	9,125	489	489	489	178,443
Fast Food Restaurant with Drive Thru	26.0	26.0	26.0	9,491	801	801	801	292,271
Convenience Market with Gas Pumps	285	285	267	103,045	8,775	8,775	8,207	3,173,157
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
8464.5	2,822	27,218	9,073	28,390

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Low Rise	23,429	349	0.0330	0.0040	83,283

Fast Food Restaurant with Drive Thru	155,871	349	0.0330	0.0040	507,934
Convenience Market with Gas Pumps	442,193	349	0.0330	0.0040	231,256
Parking Lot	414,500	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Low Rise	208,406	0.00
Fast Food Restaurant with Drive Thru	1,349,207	690,722
Convenience Market with Gas Pumps	428,744	2,255,253
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Low Rise	3.80	—
Fast Food Restaurant with Drive Thru	51.2	—
Convenience Market with Gas Pumps	17.4	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Convenience Market with Gas Pumps	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market with Gas Pumps	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	30.7	annual days of extreme heat
Extreme Precipitation	0.15	annual days with precipitation above 20 mm

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

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

6.2. Initial Climate Risk Scores

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

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

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	77.1
AQ-PM	7.45
AQ-DPM	3.61
Drinking Water	87.0
Lead Risk Housing	39.1
Pesticides	39.4
Toxic Releases	2.81
Traffic	13.8
Effect Indicators	—

CleanUp Sites	94.2
Groundwater	92.8
Haz Waste Facilities/Generators	78.8
Impaired Water Bodies	0.00
Solid Waste	99.9
Sensitive Population	—
Asthma	54.8
Cardio-vascular	73.9
Low Birth Weights	99.2
Socioeconomic Factor Indicators	—
Education	54.1
Housing	34.2
Linguistic	38.1
Poverty	76.4
Unemployment	95.3

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	33.78673168
Employed	3.811112537
Median HI	21.35249583
Education	—
Bachelor's or higher	26.78044399
High school enrollment	100
Preschool enrollment	39.0606955
Transportation	—

Auto Access	32.77300141
Active commuting	75.32400873
Social	—
2-parent households	57.35916848
Voting	45.82317464
Neighborhood	—
Alcohol availability	90.37597844
Park access	24.44501476
Retail density	3.387655588
Supermarket access	7.275760298
Tree canopy	0.051328115
Housing	—
Homeownership	62.60746824
Housing habitability	64.36545618
Low-inc homeowner severe housing cost burden	44.92493263
Low-inc renter severe housing cost burden	77.50545361
Uncrowded housing	56.87155139
Health Outcomes	—
Insured adults	15.69357115
Arthritis	0.0
Asthma ER Admissions	37.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	7.6

Cognitively Disabled	60.3
Physically Disabled	25.6
Heart Attack ER Admissions	35.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	96.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	64.0
Elderly	23.5
English Speaking	39.9
Foreign-born	36.0
Outdoor Workers	55.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.4
Traffic Density	9.6
Traffic Access	23.0
Other Indices	—
Hardship	66.7
Other Decision Support	—

2016 Voting	56.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	75.0
Healthy Places Index Score for Project Location (b)	23.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	5 apartment unit, 4,180 SF, caretaker residence; 4,445 SF FF restaurant w/drive thru; 13,700 SF C-store with coffee shop; 125 space parking lot covering 343,660 SF; and 133,070 SF of landscaping, all on 11.41 acres of developed area.
Construction: Construction Phases	Construction to start ~Jan 2023 and end ~May 2023
Operations: Vehicle Data	Project trip generation rates obtained from Ganddini Circulation Assessment (April 13, 2022) and include reductions for internal capture and diverted link. Apartment = 5 trips/DU, FF restaurant w/DT = 5.85 trips/TSF, Conv market with gas pumps = 6.95 trips/pump (includes alt energy charging stations too).
Operations: Hearths	No woodstoves or wood fireplaces will be used on-site.