# Appendix B

## Air Quality Emissions Calculations and Modeling

ESA

# B.1-1 Assumptions

## Santa Barbara County Last-Mile Broadband Program

*defaults are in blue* **updated** **9/5/2024**

**PROJECT CHARACTERISTICS**

| | |
|---|---|
| Location | Santa Barbara County |
| Electricity Demand Forecast Zone | 6 |
| Land Use Setting | Suburban |
| Start of Construction | 3/1/2025 |
| Operational Year | 2027 |
| Utility Company | SCE |
| CO2 intensity | *default* |

**LAND USE**

| Land Use | CalEEMod Land Use Subtype | Unit Amt | Size Metric | Lot Ac | SF | Predominant Soil Type | Description |
|---|---|---|---|---|---|---|---|
| Linear | User Defined Linear | 72 | miles | 87.273 | 3801600 | Sand Gravel | Underground Fiber Line |
| Other Non-Asphalt Surface | Other Non-Asphalt Surface | 8.64 | 1000 sf | 0.19835 | 8640 | | Concrete pad for prefab buildings |

**Notes:**

*For modeling purposes, it is assumed one prefab storage building per mile

*Per Project Description, a total of 57 miles of conduit will be installed for the first 4 Priority Areas, out of the 9 total Priority Areas. The modeled quantities are based on the construction of 5 Priority Areas, which would likely be constructed simultaneously.

*The assumed maximum width of ground disturbance would be 10 feet

**CONSTRUCTION**

**Construction Phasing**

| Construction Type | Construction Phase | Start Date | End Date | Days/week | Work Days per Phase |
|---|---|---|---|---|---|
| Linear Construction | Linear, Grubbing & Land Clearing | 3/1/2025 | 4/30/2025 | 5 | 43 |
| | Drilling | 5/1/2025 | 11/18/2025 | 5 | 144 |
| | Trenching and Installation | 11/19/2025 | 12/25/2026 | 5 | 288 |
| Land Use Construction | Site Preparation | 12/26/2026 | 1/15/2027 | 5 | 15 |
| | Paving | 1/16/2027 | 2/28/2027 | 5 | 30 |
| | | | **Total Days** | | **520** |

**Notes:**

*It is assumed that for 1 mile of underground conduit, 1 drill rig is estimated to take approximately 10 days and 1 trencher would take an estimated 18 to 20 days (approximately 30 days total).

*Based off the 24 month construction timeframe for all Priority Areas, as described in Project Description

*The total construction schedule represents the simultaneous construction of 5 Priority Areas

**Offroad Equipment**

| Construction Phase | Equipment | Unit Amt | Hours/Day | HP | LF | Engine Tier | Notes |
|---|---|---|---|---|---|---|---|
| Linear, Grubbing & Land Clearing | Trenchers | 10 | 10 | *default* | *default* | *default* | Accounts for cable plow and spider plows |
| | Rubber Tired Dozer | 5 | 10 | *default* | *default* | *default* | |
| | Tractors/Loaders/Backhoes | 5 | 10 | *default* | *default* | *default* | |
| Drilling | Bore/Drill Rig | 5 | 10 | *default* | *default* | *default* | |
| | Tractors/Loaders/Backhoes | 10 | 10 | *default* | *default* | *default* | Accounts for tractors and backhoes |
| | Industrial/Concrete Saw | 5 | 10 | *default* | *default* | *default* | |
| | Trenchers | 5 | 10 | *default* | *default* | *default* | |
| | Excavator | 5 | 10 | *default* | *default* | *default* | |
| Trenching and Installation | Off-Highway Trucks | 10 | 10 | *default* | *default* | *default* | Accounts for Line truck and utility trucks |
| | Trencher | 10 | 10 | *default* | *default* | *default* | Accounts for cable plows and trenchers |
| | Excavators | 5 | 10 | *default* | *default* | *default* | |
| | Dumpers | 5 | 10 | *default* | *default* | *default* | |
| | Tractors/Loaders/Backhoes | 5 | 10 | *default* | *default* | *default* | |
| | Bore/Drill Rig | 10 | 10 | *default* | *default* | *default* | Accounts for Drill Rig and Jackhammer |
| | Industrial/Concrete Saw | 5 | 10 | *default* | *default* | *default* | |
| | Air Compressor | 5 | 10 | *default* | *default* | *default* | |
| Site Preparation | Rubber Tired Dozers | 5 | 10 | *default* | *default* | *default* | |
| | Tractors/Loaders/Backhoes | 5 | 10 | *default* | *default* | *default* | |
| Paving | Pavers | 5 | 10 | *default* | *default* | *default* | |
| | Paving Equipment | 5 | 10 | *default* | *default* | *default* | |
| | Rollers | 5 | 10 | *default* | *default* | *default* | |

**Notes:**

*Equipment list based off construction equipment listed in Project Description

*Project Description assumes construction occuring from 7a.m. - 6p.m.

*Construction Equipment is assumed to be representative of the construction of the 5 simultaneously constructed Priority Areas

**Dust from Material Movement**

| Phase | Material Import/Fill (cy) | Material Export/Cut (cy) | Size Metric | Acres Graded |
|---|---|---|---|---|
| Trenching | 87040 | 87040 | cy | default |

**Notes:**

*Assumed that material excavated (cut) will be replaced after trenching/excavation activities with balanced material movement (fill)

**Ground Disturbance**

| Phase | Size Metric | Unit Amt | | Notes | | |
|---|---|---|---|---|---|---|
| Access Vaults | Area | 15 | sf | PD notes that 1 vault per 700 feet. | For 72 miles = | |
| | Depth | 4 | feet | | | 544 |
| | Access Vault Volume (cubic yards) | 2.22 | cy | | Access Vaults | |
| | **Total** | **1208.89** | cy | | | |
| Bore Entry/Exit Pits | Area | 12 | sf | PD notes that 1 vault per 700 feet. | For 72 miles = | |
| | Depth | 5 | feet | | | 544 |
| | Pit Volume (cubic yards) | 2.22 | cy | | Bore Pits | |
| | **Total** | **1208.89** | cy | | | |
| Horizontal Drilling | Diameter | 0.33 | feet (4 inches) | Represents 700 feet of horizontal drilling. | For 72 miles = | |
| | Length | 700 | feet | | | 544 |
| | Total (cubic feet) | 61.09 | cf | | | |
| | Drilling (cubic yards) | 2.26 | cy | | | |
| | **Total** | **1230.78** | cy | | | |
| Trenching | Width | 1.5 | feet (18 inches) | Represents 700 feet of trenching. | For 72 miles = | |
| | Depth | 4 | feet (48 inches) | | | 544 |
| | Length | 700 | feet | | | |
| | Total (cubic feet) | 4200 | cf | | | |
| | Trenching (cubic yards) | 155.56 | cy | | | |
| | **Total** | **84622.22** | cy | | | |
| Utility Poles | Diameter | 1.58 | feet (19 inches) | Represents 1 pole, PD notes 1 pole per 300 feet. | For 72 miles = | |
| | Depth | 10 | feet | | | 1268 |
| | Pole Volume (cubic yards) | 0.73 | cy | | poles | |
| | **Total** | **924.68** | cy | | | |

Notes:

*Total amounts are representative of ground disturbance in all 5 Priority Areas

*Specifications of dimensions noted in the Project Description

*In areas where conditions are unsuitable for drilling, trenching would be needed to install the conduits. Therefore, either drilling or trenching would occur. As a conservative estimate, because trenching would create greater material movement, it was used to calculate cut/fill amounts

*It is assumed that utility poles are to be used where areas where trenching would be difficult for placing fiber optic line underground (e.g., rocky areas) or areas characterized by extreme topography. Therefore, because trenching would create more cubic yards of material movement than ultility pole installation, it was conservatively used to calculate cut/fill amounts

**Trips & VMT** truck hauling capacity 14 cy

| Phase Name | # of worker trips/day | # vendor trips/day | # haul trips/day | Trip length worker (mi) | Trip length vendor (mi) | Trip length haul (mi) | Vehicle Class Worker | Vehicle Class Vendor | Vehicle Class Hauling |
|---|---|---|---|---|---|---|---|---|---|
| All Phases | 50 | 50 | 50 | *default* | *default* | *default* | LDA,LDT1,LDT2 | HHDT,MHDT | HHDT |

**Notes:**

*Assumes crews of 5 members per priority area

*Assumes 10 vendor and 10 haul trips per day for concrete, materials, etc. per priority area

# B.1-2 Construction Air Quality Calculations and Modeling

**Santa Barbara County Broadband Project**

**Air Quality Construction Analysis**

**Unmitigated**

| **Annual Maximums by Phase**<br>**Source** | **ROG** | **NOX** | **CO** | **SO2** | **Exhaust PM10** | **Fugitive PM10** | **Total PM10** | **Exhaust PM2.5** | **Fugitive PM2.5** | **Total PM2.5** |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | **ton/year** | | | | |
| Linear, Grubbing and Land Clearing 2025 | 0.20 | 1.86 | 1.75 | 3.68E-03 | 0.08 | 0.03 | 0.11 | 0.07 | 0.01 | 0.08 |
| Drilling 2025 | 0.38 | 3.71 | 5.04 | 0.01 | 0.12 | 0.10 | 0.22 | 0.11 | 0.03 | 0.13 |
| Trenching and Installation 2025 | 0.21 | 1.62 | 2.00 | 0.01 | 0.05 | 0.02 | 0.08 | 0.05 | 0.01 | 0.06 |
| Trenching and Installation 2026 | 1.66 | 12.83 | 16.60 | 0.04 | 0.40 | 0.18 | 0.58 | 0.36 | 0.05 | 0.41 |
| Site Preparation 2026 | 0.01 | 0.14 | 0.13 | 2.68E-04 | 0.01 | 3.04E-03 | 0.01 | 0.01 | 8.20E-04 | 0.01 |
| Site Preparation 2027 | 0.03 | 0.34 | 0.31 | 6.71E-04 | 0.01 | 0.01 | 0.02 | 0.01 | 2.05E-03 | 0.01 |
| Paving 2027 | 0.15 | 0.42 | 0.52 | 1.09E-03 | 0.01 | 0.02 | 0.04 | 0.01 | 0.01 | 0.02 |

| **Annual Totals**<br>**Source** | **ROG** | **NOX** | **CO** | **SO2** | **Exhaust PM10** | **Fugitive PM10** | **Total PM10** | **Exhaust PM2.5** | **Fugitive PM2.5** | **Total PM2.5** |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | **ton/year** | | | | |
| 2025 | 0.79 | 7.19 | 8.79 | 0.02 | 0.25 | 0.15 | 0.40 | 0.23 | 0.04 | 0.27 |
| 2026 | 1.68 | 12.97 | 16.73 | 0.04 | 0.40 | 0.19 | 0.59 | 0.37 | 0.05 | 0.42 |
| 2027 | 0.19 | 0.76 | 0.84 | 1.76E-03 | 0.03 | 0.03 | 0.06 | 0.03 | 0.01 | 0.03 |
| **Project Annual Maximum Emissions** | **1.68** | **12.97** | **16.73** | **0.04** | **0.40** | **0.19** | **0.59** | **0.37** | **0.05** | **0.42** |
| **Threshold** | **25.0** | **25.0** | **None** | **None** | **None** | **None** | **None** | **None** | **None** | **None** |
| **Exceed Threshold (Y/N)?** | **No** | **No** | **No** | **No** | **No** | **No** | **No** | **No** | **No** | **No** |

**Santa Barbara County Broadband Project**

**Air Quality Construction Analysis**

**Unmitigated**

| Annual by Phase | Onsite Emissions | | | | | | | | | | Offsite Emissions | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOX | CO | SO2 | Exhaust PM10 | Fugitive PM10 | Total PM10 | Exhaust PM2.5 | Fugitive PM2.5 | Total PM2.5 | ROG | NOX | CO | SO2 | Exhaust PM10 | Fugitive PM10 | Total PM10 | Exhaust PM2.5 | Fugitive PM2.5 | Total PM2.5 |
| Source | ton/year | | | | | | | | | | ton/year | | | | | | | | | |
| Linear, Grubbing and Land Clearing 2025 | 0.19 | 1.71 | 1.66 | 2.58E-03 | 0.07 | 0.00 | 0.07 | 0.07 | 0.00 | 0.07 | 0.01 | 0.15 | 0.09 | 1.10E-03 | 1.67E-03 | 0.03 | 0.03 | 1.20E-03 | 0.01 | 0.01 |
| Drilling 2025 | 0.36 | 3.21 | 4.73 | 0.01 | 0.11 | 0.00 | 0.11 | 0.10 | 0.00 | 0.10 | 0.02 | 0.50 | 0.31 | 3.67E-03 | 0.01 | 0.10 | 0.11 | 4.02E-03 | 0.03 | 0.03 |
| Trenching and Installation 2025 | 0.20 | 1.51 | 1.93 | 4.39E-03 | 0.05 | 2.52E-04 | 0.05 | 0.05 | 3.82E-05 | 0.05 | 0.01 | 0.11 | 0.07 | 7.84E-04 | 1.20E-03 | 0.02 | 0.02 | 8.57E-04 | 0.01 | 0.01 |
| Trenching and Installation 2026 | 1.62 | 11.98 | 16.09 | 0.04 | 0.39 | 0.00 | 0.39 | 0.35 | 3.19E-04 | 0.35 | 0.04 | 0.85 | 0.52 | 3.72E-03 | 0.01 | 0.18 | 0.19 | 0.01 | 0.05 | 0.06 |
| Site Preparation 2026 | 0.01 | 0.13 | 0.12 | 2.06E-04 | 0.01 | 0.00 | 0.01 | 4.96E-03 | 0.00 | 4.96E-03 | 6.89E-04 | 0.01 | 0.01 | 6.21E-05 | 1.67E-04 | 3.04E-03 | 0.00 | 1.20E-04 | 8.20E-04 | 9.40E-04 |
| Site Preparation 2027 | 0.03 | 0.30 | 0.29 | 5.16E-04 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 1.64E-03 | 0.03 | 0.02 | 1.55E-04 | 2.99E-04 | 0.01 | 0.01 | 2.99E-04 | 2.05E-03 | 2.35E-03 |
| Paving 2027 | 0.15 | 0.33 | 0.47 | 6.54E-04 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 4.60E-03 | 0.10 | 0.06 | 4.35E-04 | 8.37E-04 | 0.02 | 0.02 | 8.37E-04 | 0.01 | 0.01 |

| Emissions | ROG | NOX | CO | SO2 | Exhaust PM10 | Fugitive PM10 | Total PM10 | Exhaust PM2.5 | Fugitive PM2.5 | Total PM2.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| Linear, Grubbing and Land Clearing 2025 | 0.20 | 1.86 | 1.75 | 3.68E-03 | 0.08 | 0.03 | 0.11 | 0.07 | 0.01 | 0.08 |
| Drilling 2025 | 0.38 | 3.71 | 5.04 | 0.01 | 0.12 | 0.10 | 0.22 | 0.11 | 0.03 | 0.13 |
| Trenching and Installation 2025 | 0.21 | 1.62 | 2.00 | 0.01 | 0.05 | 0.02 | 0.08 | 0.05 | 0.01 | 0.06 |
| Trenching and Installation 2026 | 1.66 | 12.83 | 16.60 | 0.04 | 0.40 | 0.18 | 0.58 | 0.36 | 0.05 | 0.41 |
| Site Preparation 2026 | 0.01 | 0.14 | 0.13 | 2.68E-04 | 0.01 | 3.04E-03 | 0.01 | 0.01 | 8.20E-04 | 0.01 |
| Site Preparation 2027 | 0.03 | 0.34 | 0.31 | 6.71E-04 | 0.01 | 0.01 | 0.02 | 0.01 | 2.05E-03 | 0.01 |
| Paving 2027 | 0.15 | 0.42 | 0.52 | 1.09E-03 | 0.01 | 0.02 | 0.04 | 0.01 | 0.01 | 0.02 |
| **Project Daily Maximum Emissions** | **1.66** | **12.83** | **16.60** | **0.04** | **0.40** | **0.18** | **0.58** | **0.36** | **0.05** | **0.41** |

# Santa Barbara County Last-Mile Broadband Program Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Santa Barbara County Last-Mile Broadband Program |
| Construction Start Date | 3/1/2025 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.10 |
| Precipitation (days) | 27.8 |
| Location | Los Alamos, CA, USA |
| County | Santa Barbara |
| City | Unincorporated |
| Air District | Santa Barbara County APCD |
| Air Basin | South Central Coast |
| TAZ | 3361 |
| EDFZ | 6 |
| Electric Utility | Pacific Gas & Electric Company |
| 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 |
|---|---|---|---|---|---|---|---|---|
| User Defined Linear | 72.0 | Mile | 87.3 | 0.00 | — | — | — | — |
| Other Non-Asphalt Surfaces | 8.64 | 1000sqft | 0.20 | 0.00 | 0.00 | 0.00 | — | — |

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

No measures selected

# 2. Emissions Summary

## 2.1. Construction Emissions Compared Against Thresholds

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

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 15.7 | 13.0 | 99.9 | 129 | 0.32 | 3.55 | 1.45 | 4.99 | 3.25 | 0.39 | 3.64 | — | 34,580 | 34,580 | 1.45 | 0.94 | 10.7 | 34,907 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 16.3 | 13.5 | 105 | 130 | 0.34 | 3.55 | 1.45 | 4.99 | 3.25 | 0.39 | 3.64 | — | 34,628 | 34,628 | 1.48 | 0.97 | 0.28 | 34,953 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 11.1 | 9.19 | 71.1 | 91.7 | 0.22 | 2.20 | 1.02 | 3.22 | 2.01 | 0.28 | 2.28 | — | 24,469 | 24,469 | 1.03 | 0.67 | 3.11 | 24,698 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.03 | 1.68 | 13.0 | 16.7 | 0.04 | 0.40 | 0.19 | 0.59 | 0.37 | 0.05 | 0.42 | — | 4,051 | 4,051 | 0.17 | 0.11 | 0.51 | 4,089 |

## 2.2. Construction Emissions by Year, Unmitigated

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

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 11.4 | 9.40 | 86.4 | 81.3 | 0.17 | 3.55 | 1.44 | 4.99 | 3.25 | 0.39 | 3.64 | — | 17,904 | 17,904 | 0.80 | 0.83 | 10.7 | 18,182 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2026 | 15.7 | 13.0 | 99.9 | 129 | 0.32 | 3.08 | 1.45 | 4.54 | 2.82 | 0.39 | 3.21 | — | 34,580 | 34,580 | 1.45 | 0.94 | 10.1 | 34,907 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 16.3 | 13.5 | 105 | 130 | 0.34 | 3.55 | 1.45 | 4.99 | 3.25 | 0.39 | 3.64 | — | 34,628 | 34,628 | 1.48 | 0.97 | 0.28 | 34,953 |
| 2026 | 15.7 | 13.0 | 100 | 130 | 0.32 | 3.08 | 1.45 | 4.54 | 2.82 | 0.39 | 3.21 | — | 34,575 | 34,575 | 1.45 | 0.94 | 0.26 | 34,893 |
| 2027 | 10.9 | 10.2 | 62.5 | 58.8 | 0.13 | 2.43 | 1.44 | 3.87 | 2.24 | 0.39 | 2.63 | — | 15,118 | 15,118 | 0.66 | 0.79 | 0.24 | 15,369 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 5.30 | 4.33 | 39.4 | 48.1 | 0.11 | 1.36 | 0.85 | 2.20 | 1.24 | 0.23 | 1.47 | — | 10,786 | 10,786 | 0.48 | 0.50 | 2.77 | 10,949 |
| 2026 | 11.1 | 9.19 | 71.1 | 91.7 | 0.22 | 2.20 | 1.02 | 3.22 | 2.01 | 0.28 | 2.28 | — | 24,469 | 24,469 | 1.03 | 0.67 | 3.11 | 24,698 |
| 2027 | 1.13 | 1.03 | 4.14 | 4.60 | 0.01 | 0.15 | 0.16 | 0.31 | 0.14 | 0.04 | 0.18 | — | 1,217 | 1,217 | 0.05 | 0.08 | 0.44 | 1,244 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.97 | 0.79 | 7.19 | 8.79 | 0.02 | 0.25 | 0.15 | 0.40 | 0.23 | 0.04 | 0.27 | — | 1,786 | 1,786 | 0.08 | 0.08 | 0.46 | 1,813 |
| 2026 | 2.03 | 1.68 | 13.0 | 16.7 | 0.04 | 0.40 | 0.19 | 0.59 | 0.37 | 0.05 | 0.42 | — | 4,051 | 4,051 | 0.17 | 0.11 | 0.51 | 4,089 |
| 2027 | 0.21 | 0.19 | 0.76 | 0.84 | < 0.005 | 0.03 | 0.03 | 0.06 | 0.03 | 0.01 | 0.03 | — | 201 | 201 | 0.01 | 0.01 | 0.07 | 206 |

# 3. Construction Emissions Details

## 3.1. Site Preparation (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipm | 7.54 | 6.34 | 58.6 | 56.0 | 0.10 | 2.52 | — | 2.52 | 2.31 | — | 2.31 | — | 10,432 | 10,432 | 0.42 | 0.08 | — | 10,468 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.09 | 0.07 | 0.69 | 0.66 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 122 | 122 | < 0.005 | < 0.005 | — | 123 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.01 | 0.13 | 0.12 | < 0.005 | 0.01 | — | 0.01 | < 0.005 | — | < 0.005 | — | 20.3 | 20.3 | < 0.005 | < 0.005 | — | 20.3 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.22 | 0.21 | 0.16 | 1.77 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.07 | 0.07 | — | 302 | 302 | 0.01 | 0.01 | 0.03 | 306 |
| Vendor | 0.07 | 0.04 | 1.38 | 0.64 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 872 | 872 | 0.03 | 0.12 | 0.05 | 910 |
| Hauling | 0.27 | 0.07 | 5.07 | 1.69 | 0.02 | 0.07 | 0.90 | 0.97 | 0.04 | 0.25 | 0.30 | — | 3,614 | 3,614 | 0.19 | 0.56 | 0.17 | 3,787 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.55 | 3.55 | < 0.005 | < 0.005 | 0.01 | 3.61 |
| Vendor | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 10.2 | 10.2 | < 0.005 | < 0.005 | 0.01 | 10.7 |
| Hauling | < 0.005 | < 0.005 | 0.06 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 42.4 | 42.4 | < 0.005 | 0.01 | 0.03 | 44.5 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.59 | 0.59 | < 0.005 | < 0.005 | < 0.005 | 0.60 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.70 | 1.70 | < 0.005 | < 0.005 | < 0.005 | 1.77 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.02 | 7.02 | < 0.005 | < 0.005 | 0.01 | 7.37 |

## 3.3. Site Preparation (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 7.33 | 6.16 | 56.2 | 54.9 | 0.10 | 2.38 | — | 2.38 | 2.19 | — | 2.19 | — | 10,432 | 10,432 | 0.42 | 0.08 | — | 10,468 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.22 | 0.18 | 1.65 | 1.61 | < 0.005 | 0.07 | — | 0.07 | 0.06 | — | 0.06 | — | 306 | 306 | 0.01 | < 0.005 | — | 307 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.30 | 0.29 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 50.7 | 50.7 | < 0.005 | < 0.005 | — | 50.9 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.22 | 0.20 | 0.15 | 1.65 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.07 | 0.07 | — | 296 | 296 | 0.01 | 0.01 | 0.03 | 301 |
| Vendor | 0.07 | 0.03 | 1.33 | 0.61 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 854 | 854 | 0.03 | 0.12 | 0.05 | 892 |
| Hauling | 0.27 | 0.07 | 4.86 | 1.64 | 0.02 | 0.04 | 0.90 | 0.95 | 0.04 | 0.25 | 0.30 | — | 3,535 | 3,535 | 0.19 | 0.56 | 0.16 | 3,708 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 8.70 | 8.70 | < 0.005 | < 0.005 | 0.02 | 8.85 |
| Vendor | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 25.1 | 25.1 | < 0.005 | < 0.005 | 0.02 | 26.2 |
| Hauling | 0.01 | < 0.005 | 0.14 | 0.05 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 104 | 104 | 0.01 | 0.02 | 0.08 | 109 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 1.44 | 1.44 | < 0.005 | < 0.005 | < 0.005 | 1.47 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 4.15 | 4.15 | < 0.005 | < 0.005 | < 0.005 | 4.34 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.01 | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 17.2 | 17.2 | < 0.005 | < 0.005 | 0.01 | 18.0 |

## 3.5. Paving (2027) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 2.74 | 2.30 | 21.7 | 31.1 | 0.04 | 0.93 | — | 0.93 | 0.86 | — | 0.86 | — | 4,722 | 4,722 | 0.19 | 0.04 | — | 4,738 |
| Paving | 7.62 | 7.62 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.19 | 1.78 | 2.56 | < 0.005 | 0.08 | — | 0.08 | 0.07 | — | 0.07 | — | 388 | 388 | 0.02 | < 0.005 | — | 389 |
| Paving | 0.63 | 0.63 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.33 | 0.47 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 64.3 | 64.3 | < 0.005 | < 0.005 | — | 64.5 |
| Paving | 0.11 | 0.11 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.22 | 0.20 | 0.15 | 1.65 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.07 | 0.07 | — | 296 | 296 | 0.01 | 0.01 | 0.03 | 301 |
| Vendor | 0.07 | 0.03 | 1.33 | 0.61 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 854 | 854 | 0.03 | 0.12 | 0.05 | 892 |
| Hauling | 0.27 | 0.07 | 4.86 | 1.64 | 0.02 | 0.04 | 0.90 | 0.95 | 0.04 | 0.25 | 0.30 | — | 3,535 | 3,535 | 0.19 | 0.56 | 0.16 | 3,708 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.02 | 0.02 | 0.01 | 0.13 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 24.4 | 24.4 | < 0.005 | < 0.005 | 0.04 | 24.8 |
| Vendor | 0.01 | < 0.005 | 0.11 | 0.05 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 70.2 | 70.2 | < 0.005 | 0.01 | 0.07 | 73.4 |
| Hauling | 0.02 | 0.01 | 0.40 | 0.13 | < 0.005 | < 0.005 | 0.07 | 0.08 | < 0.005 | 0.02 | 0.02 | — | 291 | 291 | 0.02 | 0.05 | 0.22 | 305 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.03 | 4.03 | < 0.005 | < 0.005 | 0.01 | 4.10 |
| Vendor | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 11.6 | 11.6 | < 0.005 | < 0.005 | 0.01 | 12.1 |
| Hauling | < 0.005 | < 0.005 | 0.07 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 48.1 | 48.1 | < 0.005 | 0.01 | 0.04 | 50.5 |

## 3.7. Linear, Grubbing & Land Clearing (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.8 | 9.06 | 79.7 | 77.0 | 0.12 | 3.47 | — | 3.47 | 3.20 | — | 3.20 | — | 13,019 | 13,019 | 0.53 | 0.11 | — | 13,064 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.8 | 9.06 | 79.7 | 77.0 | 0.12 | 3.47 | — | 3.47 | 3.20 | — | 3.20 | — | 13,019 | 13,019 | 0.53 | 0.11 | — | 13,064 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road | 1.27 | 1.07 | 9.39 | 9.07 | 0.01 | 0.41 | — | 0.41 | 0.38 | — | 0.38 | — | 1,534 | 1,534 | 0.06 | 0.01 | — | 1,539 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.19 | 1.71 | 1.66 | < 0.005 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 254 | 254 | 0.01 | < 0.005 | — | 255 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.24 | 0.23 | 0.16 | 1.87 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.07 | 0.07 | — | 315 | 315 | 0.02 | 0.01 | 1.39 | 321 |
| Vendor | 0.08 | 0.04 | 1.40 | 0.67 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 888 | 888 | 0.04 | 0.12 | 2.26 | 928 |
| Hauling | 0.29 | 0.07 | 5.13 | 1.78 | 0.05 | 0.07 | 0.90 | 0.97 | 0.04 | 0.25 | 0.30 | — | 3,682 | 3,682 | 0.22 | 0.59 | 7.09 | 3,869 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.24 | 0.22 | 0.18 | 1.91 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.07 | 0.07 | — | 308 | 308 | 0.02 | 0.01 | 0.04 | 313 |
| Vendor | 0.08 | 0.04 | 1.44 | 0.69 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 889 | 889 | 0.04 | 0.12 | 0.06 | 927 |
| Hauling | 0.29 | 0.07 | 5.27 | 1.80 | 0.05 | 0.07 | 0.90 | 0.97 | 0.04 | 0.25 | 0.30 | — | 3,683 | 3,683 | 0.22 | 0.59 | 0.18 | 3,863 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.02 | 0.22 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 36.3 | 36.3 | < 0.005 | < 0.005 | 0.07 | 37.0 |
| Vendor | 0.01 | < 0.005 | 0.17 | 0.08 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 105 | 105 | < 0.005 | 0.01 | 0.12 | 109 |
| Hauling | 0.03 | 0.01 | 0.63 | 0.21 | 0.01 | 0.01 | 0.11 | 0.11 | 0.01 | 0.03 | 0.03 | — | 434 | 434 | 0.03 | 0.07 | 0.36 | 455 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 6.02 | 6.02 | < 0.005 | < 0.005 | 0.01 | 6.12 |
| Vendor | < 0.005 | < 0.005 | 0.03 | 0.01 | < 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 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.01 | < 0.005 | 0.11 | 0.04 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 71.8 | 71.8 | < 0.005 | 0.01 | 0.06 | 75.4 |

## 3.9. Drilling and Plowing (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 5.92 | 4.96 | 44.6 | 65.7 | 0.10 | 1.55 | — | 1.55 | 1.43 | — | 1.43 | — | 9,730 | 9,730 | 0.39 | 0.08 | — | 9,763 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 5.92 | 4.96 | 44.6 | 65.7 | 0.10 | 1.55 | — | 1.55 | 1.43 | — | 1.43 | — | 9,730 | 9,730 | 0.39 | 0.08 | — | 9,763 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.34 | 1.96 | 17.6 | 25.9 | 0.04 | 0.61 | — | 0.61 | 0.56 | — | 0.56 | — | 3,839 | 3,839 | 0.16 | 0.03 | — | 3,852 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipm | 0.43 | 0.36 | 3.21 | 4.73 | 0.01 | 0.11 | — | 0.11 | 0.10 | — | 0.10 | — | 636 | 636 | 0.03 | 0.01 | — | 638 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.24 | 0.23 | 0.16 | 1.87 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.07 | 0.07 | — | 315 | 315 | 0.02 | 0.01 | 1.39 | 321 |
| Vendor | 0.08 | 0.04 | 1.40 | 0.67 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 888 | 888 | 0.04 | 0.12 | 2.26 | 928 |
| Hauling | 0.29 | 0.07 | 5.13 | 1.78 | 0.05 | 0.07 | 0.90 | 0.97 | 0.04 | 0.25 | 0.30 | — | 3,682 | 3,682 | 0.22 | 0.59 | 7.09 | 3,869 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.24 | 0.22 | 0.18 | 1.91 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.07 | 0.07 | — | 308 | 308 | 0.02 | 0.01 | 0.04 | 313 |
| Vendor | 0.08 | 0.04 | 1.44 | 0.69 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 889 | 889 | 0.04 | 0.12 | 0.06 | 927 |
| Hauling | 0.29 | 0.07 | 5.27 | 1.80 | 0.05 | 0.07 | 0.90 | 0.97 | 0.04 | 0.25 | 0.30 | — | 3,683 | 3,683 | 0.22 | 0.59 | 0.18 | 3,863 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.09 | 0.07 | 0.74 | 0.00 | 0.00 | 0.12 | 0.12 | 0.00 | 0.03 | 0.03 | — | 122 | 122 | 0.01 | 0.01 | 0.24 | 124 |
| Vendor | 0.03 | 0.02 | 0.57 | 0.27 | < 0.005 | < 0.005 | 0.09 | 0.09 | < 0.005 | 0.02 | 0.03 | — | 350 | 350 | 0.02 | 0.05 | 0.39 | 366 |
| Hauling | 0.12 | 0.03 | 2.10 | 0.70 | 0.02 | 0.03 | 0.35 | 0.38 | 0.02 | 0.10 | 0.12 | — | 1,453 | 1,453 | 0.09 | 0.23 | 1.21 | 1,525 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.01 | 0.13 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | — | 20.1 | 20.1 | < 0.005 | < 0.005 | 0.04 | 20.5 |
| Vendor | 0.01 | < 0.005 | 0.10 | 0.05 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 58.0 | 58.0 | < 0.005 | 0.01 | 0.06 | 60.6 |
| Hauling | 0.02 | 0.01 | 0.38 | 0.13 | < 0.005 | < 0.005 | 0.06 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 241 | 241 | 0.01 | 0.04 | 0.20 | 253 |

## 3.11. Trenching and Installation (2025) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 15.7 | 13.2 | 98.3 | 126 | 0.29 | 3.43 | — | 3.43 | 3.15 | — | 3.15 | — | 29,748 | 29,748 | 1.21 | 0.24 | — | 29,850 |
| Dust From Material Movement | — | — | — | — | — | — | 0.02 | 0.02 | — | < 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 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.32 | 1.11 | 8.27 | 10.6 | 0.02 | 0.29 | — | 0.29 | 0.27 | — | 0.27 | — | 2,503 | 2,503 | 0.10 | 0.02 | — | 2,512 |
| Dust From Material Movement | — | — | — | — | — | — | < 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.24 | 0.20 | 1.51 | 1.93 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 414 | 414 | 0.02 | < 0.005 | — | 416 |
| Dust From Material Movement | — | — | — | — | — | — | < 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 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.24 | 0.22 | 0.18 | 1.91 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.07 | 0.07 | — | 308 | 308 | 0.02 | 0.01 | 0.04 | 313 |
| Vendor | 0.08 | 0.04 | 1.44 | 0.69 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 889 | 889 | 0.04 | 0.12 | 0.06 | 927 |
| Hauling | 0.29 | 0.07 | 5.27 | 1.80 | 0.05 | 0.07 | 0.90 | 0.97 | 0.04 | 0.25 | 0.30 | — | 3,683 | 3,683 | 0.22 | 0.59 | 0.18 | 3,863 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.01 | 0.16 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 26.0 | 26.0 | < 0.005 | < 0.005 | 0.05 | 26.4 |
| Vendor | 0.01 | < 0.005 | 0.12 | 0.06 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 74.7 | 74.7 | < 0.005 | 0.01 | 0.08 | 78.0 |
| Hauling | 0.02 | 0.01 | 0.45 | 0.15 | < 0.005 | 0.01 | 0.08 | 0.08 | < 0.005 | 0.02 | 0.02 | — | 310 | 310 | 0.02 | 0.05 | 0.26 | 325 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.03 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.30 | 4.30 | < 0.005 | < 0.005 | 0.01 | 4.37 |
| Vendor | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 12.4 | 12.4 | < 0.005 | < 0.005 | 0.01 | 12.9 |
| Hauling | < 0.005 | < 0.005 | 0.08 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 51.3 | 51.3 | < 0.005 | 0.01 | 0.04 | 53.9 |

## 3.13. Trenching and Installation (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 15.1 | 12.6 | 93.5 | 125 | 0.29 | 3.00 | — | 3.00 | 2.76 | — | 2.76 | — | 29,787 | 29,787 | 1.21 | 0.24 | — | 29,889 |
| Dust From Material Movement | — | — | — | — | — | — | 0.02 | 0.02 | — | < 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 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 15.1 | 12.6 | 93.5 | 125 | 0.29 | 3.00 | — | 3.00 | 2.76 | — | 2.76 | — | 29,787 | 29,787 | 1.21 | 0.24 | — | 29,889 |
| Dust From Material Movement | — | — | — | — | — | — | 0.02 | 0.02 | — | < 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 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.6 | 8.88 | 65.7 | 88.2 | 0.20 | 2.11 | — | 2.11 | 1.94 | — | 1.94 | — | 20,926 | 20,926 | 0.85 | 0.17 | — | 20,998 |
| Dust From Material Movement | — | — | — | — | — | — | 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipm | 1.94 | 1.62 | 12.0 | 16.1 | 0.04 | 0.39 | — | 0.39 | 0.35 | — | 0.35 | — | 3,465 | 3,465 | 0.14 | 0.03 | — | 3,476 |
| Dust From Material Movement | — | — | — | — | — | — | < 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 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.22 | 0.21 | 0.15 | 1.72 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.07 | 0.07 | — | 308 | 308 | 0.02 | 0.01 | 1.29 | 314 |
| Vendor | 0.08 | 0.04 | 1.34 | 0.62 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 872 | 872 | 0.03 | 0.12 | 2.10 | 912 |
| Hauling | 0.27 | 0.07 | 4.92 | 1.67 | 0.02 | 0.07 | 0.90 | 0.97 | 0.04 | 0.25 | 0.30 | — | 3,613 | 3,613 | 0.19 | 0.56 | 6.68 | 3,793 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.22 | 0.21 | 0.16 | 1.77 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.07 | 0.07 | — | 302 | 302 | 0.01 | 0.01 | 0.03 | 306 |
| Vendor | 0.07 | 0.04 | 1.38 | 0.64 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 872 | 872 | 0.03 | 0.12 | 0.05 | 910 |
| Hauling | 0.27 | 0.07 | 5.07 | 1.69 | 0.02 | 0.07 | 0.90 | 0.97 | 0.04 | 0.25 | 0.30 | — | 3,614 | 3,614 | 0.19 | 0.56 | 0.17 | 3,787 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.16 | 0.15 | 0.11 | 1.20 | 0.00 | 0.00 | 0.21 | 0.21 | 0.00 | 0.05 | 0.05 | — | 212 | 212 | 0.01 | 0.01 | 0.39 | 216 |
| Vendor | 0.05 | 0.03 | 0.97 | 0.44 | < 0.005 | 0.01 | 0.15 | 0.16 | 0.01 | 0.04 | 0.05 | — | 613 | 613 | 0.02 | 0.09 | 0.64 | 640 |
| Hauling | 0.19 | 0.05 | 3.58 | 1.18 | 0.02 | 0.05 | 0.63 | 0.67 | 0.03 | 0.18 | 0.21 | — | 2,539 | 2,539 | 0.14 | 0.40 | 2.03 | 2,662 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.02 | 0.22 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 35.1 | 35.1 | < 0.005 | < 0.005 | 0.06 | 35.7 |
| Vendor | 0.01 | 0.01 | 0.18 | 0.08 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 101 | 101 | < 0.005 | 0.01 | 0.11 | 106 |
| Hauling | 0.03 | 0.01 | 0.65 | 0.21 | < 0.005 | 0.01 | 0.11 | 0.12 | 0.01 | 0.03 | 0.04 | — | 420 | 420 | 0.02 | 0.07 | 0.34 | 441 |

# 4. Operations Emissions Details

## 4.10. Soil Carbon Accumulation By Vegetation Type

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

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

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

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

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Site Preparation | Site Preparation | 12/26/2026 | 1/15/2027 | 5.00 | 15.0 | — |
| Paving | Paving | 1/16/2027 | 2/28/2027 | 5.00 | 30.0 | — |
| Linear, Grubbing & Land Clearing | Linear, Grubbing & Land Clearing | 3/1/2025 | 4/30/2025 | 5.00 | 43.0 | — |
| Drilling and Plowing | Linear, Grading & Excavation | 5/1/2025 | 11/18/2025 | 5.00 | 144 | — |
| Trenching and Installation | Linear, Trenching | 11/19/2025 | 12/25/2026 | 5.00 | 288 | — |

## 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 | 5.00 | 10.0 | 367 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Average | 5.00 | 10.0 | 84.0 | 0.37 |
| Paving | Pavers | Diesel | Average | 5.00 | 10.0 | 81.0 | 0.42 |
| Paving | Paving Equipment | Diesel | Average | 5.00 | 10.0 | 89.0 | 0.36 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving | Rollers | Diesel | Average | 5.00 | 10.0 | 36.0 | 0.38 |
| Linear, Grubbing & Land Clearing | Trenchers | Diesel | Average | 10.0 | 10.0 | 40.0 | 0.50 |
| Linear, Grubbing & Land Clearing | Rubber Tired Dozers | Diesel | Average | 5.00 | 10.0 | 367 | 0.40 |
| Linear, Grubbing & Land Clearing | Tractors/Loaders/Back hoes | Diesel | Average | 5.00 | 10.0 | 84.0 | 0.37 |
| Drilling and Plowing | Bore/Drill Rigs | Diesel | Average | 5.00 | 10.0 | 83.0 | 0.50 |
| Drilling and Plowing | Tractors/Loaders/Back hoes | Diesel | Average | 10.0 | 10.0 | 84.0 | 0.37 |
| Drilling and Plowing | Concrete/Industrial Saws | Diesel | Average | 5.00 | 10.0 | 33.0 | 0.73 |
| Drilling and Plowing | Trenchers | Diesel | Average | 5.00 | 10.0 | 40.0 | 0.50 |
| Drilling and Plowing | Excavators | Diesel | Average | 5.00 | 10.0 | 36.0 | 0.38 |
| Trenching and Installation | Off-Highway Trucks | Diesel | Average | 10.0 | 10.0 | 376 | 0.38 |
| Trenching and Installation | Trenchers | Diesel | Average | 10.0 | 10.0 | 40.0 | 0.50 |
| Trenching and Installation | Excavators | Diesel | Average | 5.00 | 10.0 | 36.0 | 0.38 |
| Trenching and Installation | Dumpers/Tenders | Diesel | Average | 5.00 | 10.0 | 16.0 | 0.38 |
| Trenching and Installation | Tractors/Loaders/Back hoes | Diesel | Average | 5.00 | 10.0 | 84.0 | 0.37 |
| Trenching and Installation | Bore/Drill Rigs | Diesel | Average | 10.0 | 10.0 | 83.0 | 0.50 |
| Trenching and Installation | Concrete/Industrial Saws | Diesel | Average | 5.00 | 10.0 | 33.0 | 0.73 |
| Trenching and Installation | Air Compressors | Diesel | Average | 5.00 | 10.0 | 37.0 | 0.48 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 50.0 | 8.80 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | 50.0 | 5.30 | HHDT,MHDT |
| Site Preparation | Hauling | 50.0 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 50.0 | 8.80 | LDA,LDT1,LDT2 |
| Paving | Vendor | 50.0 | 5.30 | HHDT,MHDT |
| Paving | Hauling | 50.0 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Linear, Grubbing & Land Clearing | — | — | — | — |
| Linear, Grubbing & Land Clearing | Worker | 50.0 | 8.80 | LDA,LDT1,LDT2 |
| Linear, Grubbing & Land Clearing | Vendor | 50.0 | 5.30 | HHDT,MHDT |
| Linear, Grubbing & Land Clearing | Hauling | 50.0 | 20.0 | HHDT |
| Linear, Grubbing & Land Clearing | Onsite truck | — | — | HHDT |
| Drilling and Plowing | — | — | — | — |
| Drilling and Plowing | Worker | 50.0 | 8.80 | LDA,LDT1,LDT2 |
| Drilling and Plowing | Vendor | 50.0 | 5.30 | HHDT,MHDT |
| Drilling and Plowing | Hauling | 50.0 | 20.0 | HHDT |
| Drilling and Plowing | Onsite truck | — | — | HHDT |
| Trenching and Installation | — | — | — | — |
| Trenching and Installation | Worker | 50.0 | 8.80 | LDA,LDT1,LDT2 |
| Trenching and Installation | Vendor | 50.0 | 5.30 | HHDT,MHDT |
| Trenching and Installation | Hauling | 50.0 | 20.0 | HHDT |
| Trenching and Installation | 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) |
|---|---|---|---|---|---|

## 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 (sq. ft.) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 87.5 |
| Trenching and Installation | 87,040 | 87,040 | 0.00 | 0.00 | — |

### 5.6.2. Construction Earthmoving Control Strategies

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

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| User Defined Linear | 87.3 | 100% |
| Other Non-Asphalt Surfaces | 0.20 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 0.00 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |
| 2027 | 0.00 | 204 | 0.03 | < 0.005 |

## 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 | 6.86 | annual days of extreme heat |

| | | |
|---|---|---|
| Extreme Precipitation | 5.85 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 45.1 | annual hectares burned |

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

## 6.2. Initial Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | N/A | N/A | N/A | N/A |
| Sea Level Rise | 1 | 0 | 0 | N/A |
| Wildfire | 1 | 0 | 0 | N/A |
| Flooding | 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 | N/A | N/A | N/A | N/A |
| Extreme Precipitation | N/A | N/A | N/A | N/A |
| Sea Level Rise | 1 | 1 | 1 | 2 |
| Wildfire | 1 | 1 | 1 | 2 |
| Flooding | 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 | 11.6 |
| AQ-PM | 5.49 |
| AQ-DPM | 4.74 |
| Drinking Water | 74.4 |
| Lead Risk Housing | 24.6 |
| Pesticides | 80.6 |
| Toxic Releases | 7.85 |
| Traffic | 9.24 |

| | |
|---|---|
| Effect Indicators | — |
| CleanUp Sites | 27.5 |
| Groundwater | 91.8 |
| Haz Waste Facilities/Generators | 61.6 |
| Impaired Water Bodies | 77.3 |
| Solid Waste | 95.0 |
| Sensitive Population | — |
| Asthma | 21.7 |
| Cardio-vascular | 22.9 |
| Low Birth Weights | 46.5 |
| Socioeconomic Factor Indicators | — |
| Education | 54.8 |
| Housing | 16.3 |
| Linguistic | 33.3 |
| Poverty | 29.2 |
| Unemployment | 19.6 |

## 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 | 51.81573207 |
| Employed | 89.04144745 |
| Median HI | 57.39766457 |
| Education | — |
| Bachelor's or higher | 52.99627871 |
| High school enrollment | 8.995252149 |
| Preschool enrollment | 79.78955473 |

| | |
|---|---|
| Transportation | — |
| Auto Access | 76.73553189 |
| Active commuting | 34.12036443 |
| Social | — |
| 2-parent households | 98.02386757 |
| Voting | 95.64994226 |
| Neighborhood | — |
| Alcohol availability | 42.91030412 |
| Park access | 29.57782625 |
| Retail density | 4.131913255 |
| Supermarket access | 27.678686 |
| Tree canopy | 56.03746952 |
| Housing | — |
| Homeownership | 70.96111895 |
| Housing habitability | 39.17618375 |
| Low-inc homeowner severe housing cost burden | 39.58680867 |
| Low-inc renter severe housing cost burden | 27.78134223 |
| Uncrowded housing | 43.53907353 |
| Health Outcomes | — |
| Insured adults | 38.07262928 |
| Arthritis | 0.0 |
| Asthma ER Admissions | 83.7 |
| High Blood Pressure | 0.0 |
| Cancer (excluding skin) | 0.0 |
| Asthma | 0.0 |
| Coronary Heart Disease | 0.0 |
| Chronic Obstructive Pulmonary Disease | 0.0 |
| Diagnosed Diabetes | 0.0 |

| | |
|---|---|
| Life Expectancy at Birth | 44.2 |
| Cognitively Disabled | 88.7 |
| Physically  Disabled | 74.5 |
| Heart Attack ER Admissions | 64.6 |
| Mental Health Not Good | 0.0 |
| Chronic Kidney Disease | 0.0 |
| Obesity | 0.0 |
| Pedestrian Injuries | 60.6 |
| 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 | 0.2 |
| SLR Inundation Area | 0.0 |
| Children | 67.0 |
| Elderly | 27.8 |
| English Speaking | 67.2 |
| Foreign-born | 28.6 |
| Outdoor Workers | 53.6 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 87.6 |
| Traffic Density | 11.4 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 38.1 |

| | |
|---|---|
| Other Decision Support | — |
| 2016 Voting | 95.7 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 28.0 |
| Healthy Places Index Score for Project Location (b) | 67.0 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | No |
| Project Located in a Low-Income Community (Assembly Bill 1550) | No |
| Project Located in a Community Air Protection Program Community (Assembly Bill 617) | No |

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

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

## 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Based off the 24-month construction timeframe, as described in Project Description |
| Construction: Off-Road Equipment | Assumptions articulated in the Project Assumptions sheet. |
| Construction: Dust From Material Movement | See assumptions sheet |
| Construction: Trips and VMT | see assumptions sheet |