



Date: November 27, 2023
To: Mr. Timothy Roofian, Rodeo Credit Enterprises, LLC
From: M. S. Hatch Consulting, LLC
Subject: **REVISED Air Quality Study – Tentative Tract Map (TTM) 20576 Housing Development – Corner of Mesa Street and Topaz Road, Victorville, CA**

M. S. Hatch Consulting, LLC (MSHC) appreciates the opportunity to prepare the air quality study for the proposed construction and operation of the housing development shown on Tentative Tract Map (TTM) 20576 for Rodeo Credit Enterprises, LLC. The project consists of 244 single family homes on 70.80 acres in the City of Victorville. This air quality study includes the estimated criteria pollutant and greenhouse gas emissions from the construction and operation of the proposed project.

Executive Summary

Table 1 and Table 2 compare the estimated annual and daily emissions summaries from the construction and operation of the proposed housing development to the significant emission thresholds described in the Mojave Desert Air Quality Management District (MDAQMD) California Environmental Quality Act (CEQA) and Federal Conformity Guidelines, dated February 2020, included in Attachment A. The estimated emissions of criteria pollutants and greenhouse gases for each year of construction and the total operational emissions **are well below the applicable thresholds**. Greenhouse gas emissions are presented in units of carbon dioxide equivalent (CO₂e). The proposed project is not considered one of the project types that the MDAQMD CEQA Guidelines require to be evaluated for potentially exposing sensitive receptors to substantial pollutant concentrations.¹ As such, hazardous air pollutants (HAP) emissions were not calculated, and the project was not evaluated for potential health risks to sensitive receptors. This project is consistent with the existing land use plan and conforms with the applicable MDAQMD attainment or maintenance plan(s). Based on the estimated emissions from construction and operation of the project, no violation of any ambient air quality standard is expected when emissions are added to the local background levels.

¹ Residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number 4 (refer to the significance threshold discussion): any industrial project within 1000 feet; a distribution center (40 or more trucks per day) within 1000 feet; a major transportation project (50,000 or more vehicles per day) within 1000 feet; a dry cleaner using perchloroethylene within 500 feet; or a gasoline dispensing facility within 300 feet.

Table 1. Annual Emissions Summary and Significance Thresholds

Emissions Source	Total Emissions (tons per year)						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO _{2e} (MT/year)
Year 1 Construction Emissions (2024)	0.08	0.77	0.73	<0.01	0.14	0.09	111
Year 2 Construction Emissions (2025)	0.29	2.38	2.74	0.01	0.31	0.16	583
Year 3 Construction Emissions (2026)	0.19	1.46	2.40	<0.01	0.23	0.09	522
Year 4 Construction Emissions (2027)	0.18	1.39	2.34	<0.01	0.22	0.08	517
Year 5 Construction Emissions (2028)	0.18	1.32	2.30	<0.01	0.22	0.08	514
Year 6 Construction Emissions (2029)	1.96	1.24	2.22	<0.01	0.22	0.08	496
Total Operational Emissions	3.82	1.74	11.50	0.03	2.78	0.74	3,643
Significant Emissions Threshold	25	25	100	25	15	12	100,000
Threshold Exceedance (Yes/No)	No	No	No	No	No	No	No

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO_x: oxides of nitrogen; CO: Carbon monoxide; SO_x: Oxides of sulfur; PM_{2.5}: particulate matter less than 2.5 micrometers in diameter; PM₁₀: particulate matter less than 10 micrometers in diameter; CO_{2e}: Carbon dioxide equivalent; MT: metric ton

Table 2. Maximum Daily Emissions Summary and Significance Thresholds

Emissions Source	Total Emissions (pounds per day)						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO _{2e}
Year 1 Construction Emissions (2024)	3.73	36.10	34.00	0.07	6.94	4.15	7,543
Year 2 Construction Emissions (2025)	3.32	30.50	30.10	0.07	4.06	2.20	7,561
Year 3 Construction Emissions (2026)	1.52	11.10	20.10	0.03	1.76	0.69	4,530
Year 4 Construction Emissions (2027)	1.45	10.60	19.50	0.03	1.72	0.65	4,486
Year 5 Construction Emissions (2028)	1.40	10.10	19.10	0.03	1.68	0.62	4,442
Year 6 Construction Emissions (2029)	49.30	10.50	20.80	0.03	1.90	0.66	4,770
Total Operational Emissions	22.70	9.46	81.30	0.18	15.60	4.15	23,555
Significant Emissions Threshold	137	137	548	137	82	65	548,000
Threshold Exceedance (Yes/No)	No	No	No	No	No	No	No

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO_x: oxides of nitrogen; CO: Carbon monoxide; SO_x: Oxides of sulfur; PM_{2.5}: particulate matter less than 2.5 micrometers in diameter; PM₁₀: particulate matter less than 10 micrometers in diameter; CO_{2e}: Carbon dioxide equivalent

Project Description

The proposed project includes the construction of 244 single family homes and residential streets on 70.80 acres. The project site is located northeast of the intersection of Mesa Street and Cataba Road in the City of Victorville. The site location is included in Figure 1 and the proposed site plan is included in Figure 2.

Figure 1. Regional Vicinity

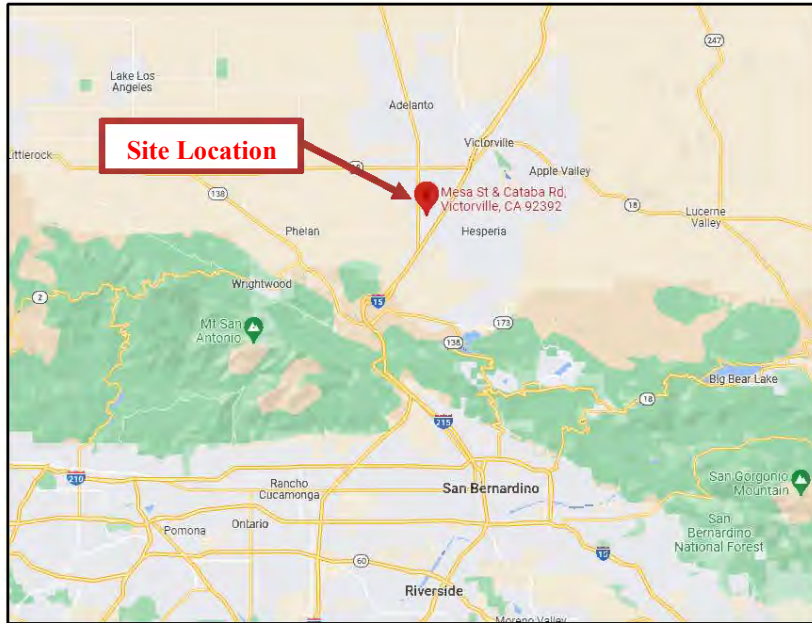
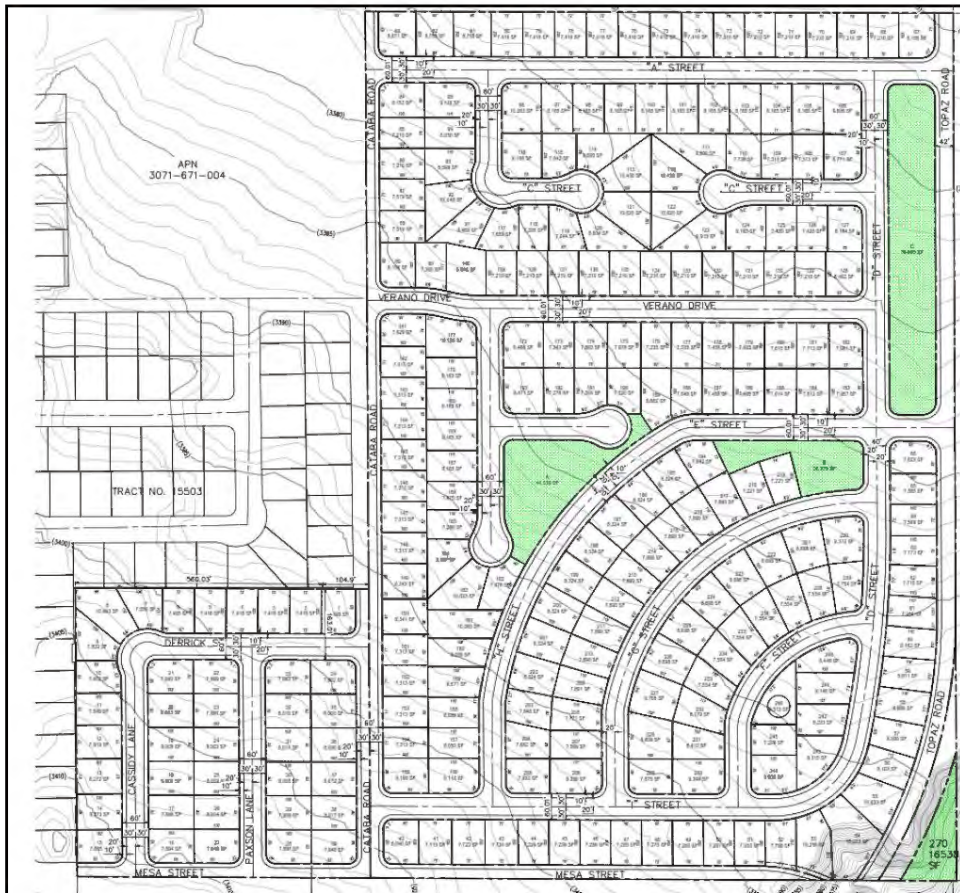


Figure 2. Site Plan – Proposed Housing Development - TTM 20576, Victorville, CA



Sources of Emissions

The emissions associated with the proposed project consist of construction and operational emissions from the housing development. Construction emissions are temporary and include emissions of criteria pollutants and greenhouse gases from construction activities during site preparation, grading, paving, building construction, and the application of architectural coatings. Operational emissions consist of area sources (i.e., re-applying architectural coatings, consumer products, and landscaping equipment), energy use (i.e., electricity and natural gas), mobile sources (e.g., commuting), solid waste disposal, water, and wastewater use (i.e., supplying and treating water and wastewater), and refrigerants (i.e., air conditioners).

Emissions Estimates

Table 3 and 4 present the annual and maximum daily emissions summaries from the construction and operation of the proposed project, respectively. Emissions were estimated using CalEEMod Version 2022.1. The detailed emissions model outputs are included in Attachment B.

This project is not considered one of the project types that the MDAQMD CEQA Guidelines require to be evaluated for potentially exposing sensitive receptors to substantial pollutant concentrations. As such, HAP emissions were not calculated, and the project was not evaluated for potential health risks to sensitive receptors.

Table 3. Annual Construction and Operational Emissions Summary

Emissions Source	Total Emissions (tons per year)						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO _{2e} (MT/year)
Construction Emissions							
Year 1 Construction Emissions (2024)	0.08	0.77	0.73	<0.01	0.14	0.09	111
Year 2 Construction Emissions (2025)	0.29	2.38	2.74	0.01	0.31	0.16	583
Year 3 Construction Emissions (2026)	0.19	1.46	2.40	<0.01	0.23	0.09	522
Year 4 Construction Emissions (2027)	0.18	1.39	2.34	<0.01	0.22	0.08	517
Year 5 Construction Emissions (2028)	0.18	1.32	2.30	<0.01	0.22	0.08	514
Year 6 Construction Emissions (2029)	1.96	1.24	2.22	<0.01	0.22	0.08	496
Operational Emissions							
Mobile	1.41	1.37	10.10	0.03	2.75	0.71	2,635
Area	2.40	0.01	1.25	<0.01	<0.01	<0.01	3
Energy	0.02	0.35	0.15	<0.01	0.03	0.03	856
Water	N/A	N/A	N/A	N/A	N/A	N/A	75
Waste	N/A	N/A	N/A	N/A	N/A	N/A	74
Refrigerants	N/A	N/A	N/A	N/A	N/A	N/A	1
Total Operational Emissions	3.82	1.74	11.50	0.03	2.78	0.74	3,643
Significant Emissions Threshold	25	25	100	25	15	12	100,000
Threshold Exceedance (Yes/No)	No	No	No	No	No	No	No

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO_x: oxides of nitrogen; CO: Carbon monoxide; SO_x: Oxides of sulfur; PM_{2.5}: particulate matter less than 2.5 micrometers in diameter; PM₁₀: particulate matter less than 10 micrometers in diameter; CO_{2e}: Carbon dioxide equivalent; MT: metric ton

Table 4. Maximum Daily Construction and Operational Emissions Summary

Emissions Source	Total Emissions (pounds per day)						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO _{2e}
Construction Emissions							
Year 1 Construction Emissions (2024)	3.73	36.10	34.00	0.07	6.94	4.15	7,543
Year 2 Construction Emissions (2025)	3.32	30.50	30.10	0.07	4.06	2.20	7,561
Year 3 Construction Emissions (2026)	1.52	11.10	20.10	0.03	1.76	0.69	4,530
Year 4 Construction Emissions (2027)	1.45	10.60	19.50	0.03	1.72	0.65	4,486
Year 5 Construction Emissions (2028)	1.40	10.10	19.10	0.03	1.68	0.62	4,442
Year 6 Construction Emissions (2029)	49.30	10.50	20.80	0.03	1.90	0.66	4,770
Operational Emissions							
Mobile	8.81	7.53	66.60	0.17	15.40	3.99	17,448
Area	13.70	N/A	13.90	<0.01	0.01	<0.01	37
Energy	0.11	1.93	0.82	0.01	0.16	0.16	5,170
Water	N/A	N/A	N/A	N/A	N/A	N/A	451.00
Waste	N/A	N/A	N/A	N/A	N/A	N/A	445.00
Refrigerants	N/A	N/A	N/A	N/A	N/A	N/A	4
Total Operational Emissions	22.70	9.46	81.30	0.18	15.60	4.15	23,555
Significant Emissions Threshold	137	137	548	137	82	65	548,000
Threshold Exceedance (Yes/No)	No	No	No	No	No	No	No

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO_x: oxides of nitrogen; CO: Carbon monoxide; SO_x: Oxides of sulfur; PM_{2.5}: particulate matter less than 2.5 micrometers in diameter; PM₁₀: particulate matter less than 10 micrometers in diameter; CO_{2e}: Carbon dioxide equivalent

Emissions Calculation Methodology

Construction and operational emissions were based on three CalEEMod land use types: *Single Family Housing, Other Asphalt Surfaces, and Other Non-Asphalt Surfaces*. A discussion on the land use types that were used for the emissions modeling is included below.

CalEEMod Land Use Type: Single Family Housing

The *Single-Family Housing* land use type was used to model the emissions associated with the proposed housing development. The total building square footage (536,800 square feet) and number of homes (244) were provided by Rodeo Credit Enterprises, LLC. The lot acreage (52.20 acres) was calculated based on the remaining area after other land use types (discussed below) were subtracted from the total project area (70.8 acres). The total landscaped area for the development was conservatively estimated based on the landscaped area for the homes and included the total area for Parcels A through C (i.e., open space, natural detention basins).²

² Landscape area for the homes was calculated based on the difference between the *Single Family Housing* lot area and the total combined area

CalEEMod Land Use Type: Other Asphalt Surfaces

The *Other Asphalt Surfaces* land use type was used to model the emissions associated with the residential streets and access roads that run through and around the housing development. The residential street and access road acreage (14.80 acres) was provided by Rodeo Credit Enterprises, LLC.³

CalEEMod Land Use Type: Other Non-Asphalt Surfaces

The *Other Non-Asphalt Surfaces* land use type was used to model the emissions associated with the sidewalks within the proposed housing development. The total sidewalk acreage (3.80 acres) was provided by Rodeo Credit Enterprises, LLC.⁴

Construction Emissions

Construction emissions were calculated using CalEEMod defaults and input provided by Rodeo Credit Enterprises, LLC. Rodeo Credit Enterprises, LLC reviewed and verified the list of construction equipment and the anticipated construction schedule.

Table 5 provides the anticipated construction schedule. Rodeo Credit Enterprises, LLC provided the proposed start date (11/4/2024) and end date (12/14/2029) and indicated that work would be conducted 5 days a week. Based on the review of other housing developments being constructed, the schedule was adjusted to have the *Paving* phase conducted prior to the *Building Construction* phase. Since construction will be conducted in multiple phases, the *Architectural Coating* phase was adjusted to overlap with end of the *Building Construction* phase. The phase durations listed in the schedule are based on CalEEMod default values.

Table 6 provides the anticipated number of equipment that will be used during each construction phase, the hours per day the equipment will be operated, and the horsepower of the equipment. The values in Table 6 are based on CalEEMod default values.

Based the data request form obtained from Rodeo Credit Enterprises, LLC, 7,900 cubic yards of material is expected to be imported during the *Grading* phase; as such, the emissions for material haul trips were included in the construction emissions. For fugitive dust emissions, CalEEMod defaults do not include any control of fugitive dust from construction sites. MDAQMD Rule 403 requires that fugitive dust from any “active operation, open storage pile, or disturbed surface area” be controlled so that no presence of dust

for the building footprint (1,950 sq. ft. for each home) and paved driveway space (480 sq. ft. for each home).

³ The total area for the residential streets and access roads was provided by Rodeo Credit Enterprises, LLC via data request form on 11/15/2022.

⁴ The total area for sidewalk acreage was provided by Rodeo Credit Enterprises, LLC via data request form on 11/15/2022.

remains visible beyond the property line. To meet this requirement, it was assumed the site would be watered three times per day.

Table 5. Construction Schedule

Construction Phase	Start Date	End Date	Days/week	Total Days
Demolition	N/A	N/A	N/A	N/A
Site Preparation	11/4/2024	12/27/2024	5	40
Grading	12/28/2024	5/30/2025	5	110
Paving	6/2/2025	9/12/2025	5	75
Building Construction	9/13/2025	12/14/2029	5	1,110
Architectural Coating	9/3/2029	12/14/2029	5	75

Table 6. Construction Equipment

Construction Phase	Equipment	Number of Equipment	Hours per day	Horsepower
Site Preparation	Rubber Tired Dozers	3	8	367
	Tractors/Loaders/Backhoes	4	8	84
Grading	Graders	1	8	148
	Excavators	2	8	36
	Tractors/Loaders/Backhoes	2	8	84
	Scrapers	2	8	423
	Rubber Tired Dozers	1	8	367
Paving	Pavers	2	8	81
	Paving Equipment	2	8	89
	Rollers	2	8	36
Building Construction	Forklifts	3	8	82
	Generator Sets	1	8	14
	Cranes	1	7	367
	Welders	1	8	46
	Tractors/Loaders/Backhoes	3	7	84
Architectural Coating	Air Compressors	1	6	37

Operational Emissions

Operational emissions consist of area sources (i.e., re-applying architectural coatings, consumer products, fireplaces, and landscaping equipment), energy use (i.e., electricity and natural gas), mobile sources (e.g., commuting), solid waste disposal, water, and wastewater use (i.e., supplying and treating water and wastewater), and refrigerants (i.e., air conditioners).

For area-source emissions, Rodeo Credit Enterprises, LLC indicated that woodstoves and fireplaces would not be installed on each home.⁵ All other operational emissions sources were calculated using CalEEMod default values.

Findings

The estimated emissions of criteria pollutants and greenhouse gases for each year of construction and the total operational emissions **are well below the applicable MDAQMD Significant Emissions Thresholds**; therefore, this project does not have a significant air quality impact on the environment. In addition, this project is not expected to expose sensitive receptors to substantial pollutant concentrations. This project is consistent with the existing land use plan and conforms with the applicable MDAQMD attainment or maintenance plan(s). Based on the estimated emissions from construction and operation of the project, no violation of any ambient air quality standard is expected when emissions are added to the local background levels. Since the construction and operational emissions are below the significance thresholds, emissions mitigation measures are not required.

⁵ Based on data request form provided by Rodeo Credit Enterprises, LLC on 11/15/2022.

**ATTACHMENT A – Mojave Desert AQMD California Environmental Quality Act (CEQA)
and Federal Conformity Guidelines**



MDAQMD

California Environmental Quality Act (CEQA)

And

Federal Conformity

Guidelines

February 2020

Planning and Rule Making Section
Air Monitoring Section

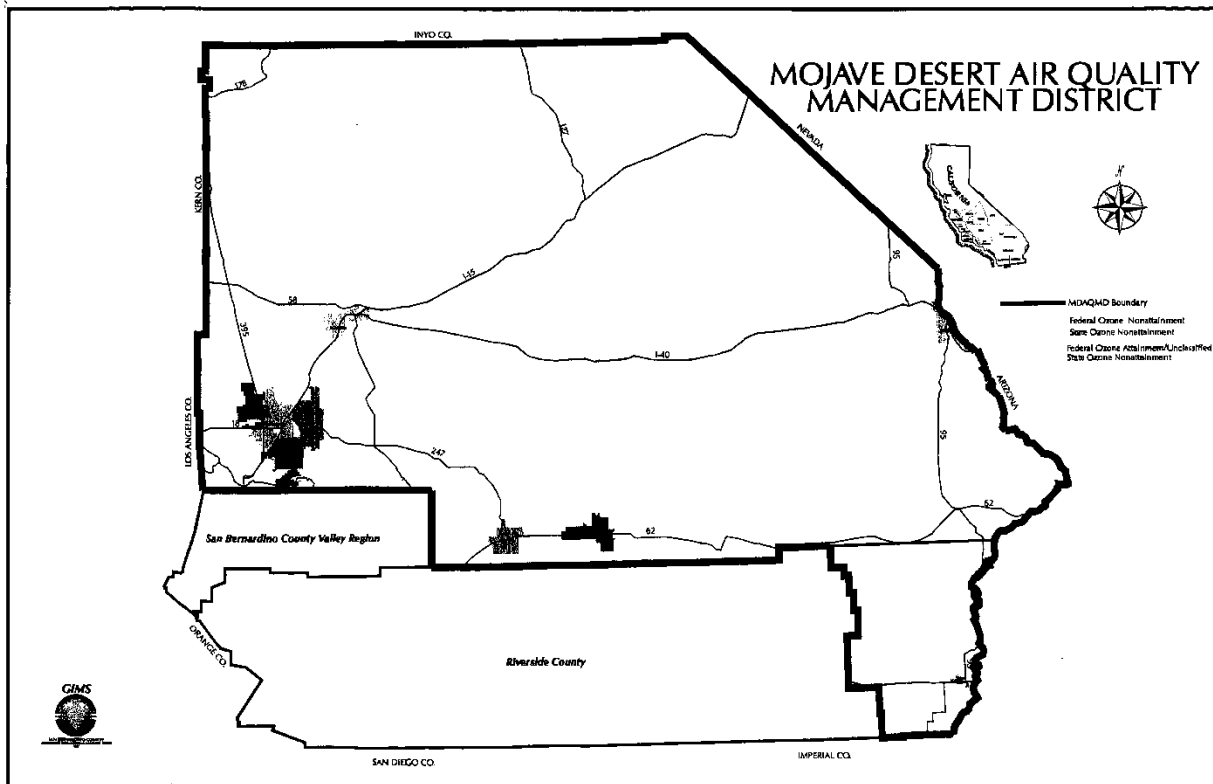
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Background

Under CEQA, the Mojave Desert Air Quality Management District (District) is an expert commenting agency on air quality and related matters within its jurisdiction or impacting on its jurisdiction. Under the Federal Clean Air Act the District has adopted federal attainment plans for ozone and PM₁₀. The District has dedicated assets to reviewing projects to ensure that they will not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan. These Guidelines are intended to assist persons preparing environmental analysis or review documents for any project within the jurisdiction of the District by providing background information and guidance on the preferred analysis approach.

Map 1 - District Boundaries



Jurisdiction

The District has jurisdiction over the desert portion of San Bernardino County and the far eastern end of Riverside County (please refer to Map 1). This region includes the incorporated communities of Adelanto, Apple Valley, Barstow, Blythe, Hesperia, Needles, Twentynine Palms, Victorville, and Yucca Valley. This region also includes the National Training Center at Fort Irwin, the Marine Corps Air Ground Combat Center, the Marine Corps Logistics Base, the eastern portion of Edwards Air Force Base, and a portion of the China Lake Naval Air Weapons Station.

Non-attainment Designations and Classification Status

The United States Environmental Protection Agency and the California Air Resources Board have designated portions of the District non-attainment for a variety of pollutants, and some of those designations have an associated classification. Please refer to Table 1 for a chart of these designations and classifications.

Table 1 - Designations and Classifications

Ambient Air Quality Standard	MDAQMD
One-hour Ozone (Federal) – standard has been revoked	Proposed attainment in 2014; historical classification Severe-17*
Eight-hour Ozone (Federal 84 ppb (1997))	Subpart 2 Nonattainment; classified Severe-15**
Eight-hour Ozone (Federal 75 ppb (2008))	Nonattainment, classified Severe-15**
Eight-hour Ozone (Federal 70 ppb (2015))	Expected nonattainment; classified Severe-15**
Ozone (State)	Nonattainment; classified Moderate
PM ₁₀ 24-hour (Federal)	Nonattainment; classified Moderate (portion of MDAQMD in Riverside County is unclassifiable/attainment)
PM _{2.5} Annual (Federal)	Unclassified/attainment
PM _{2.5} 24-hour (Federal)	Unclassified/attainment
PM _{2.5} (State)	Nonattainment**
PM ₁₀ (State)	Nonattainment
Carbon Monoxide (State and Federal)	Unclassifiable/Attainment
Nitrogen Dioxide (State and Federal)	Unclassifiable/Attainment
Sulfur Dioxide (State and Federal)	Attainment/unclassified
Lead (State and Federal)	Unclassifiable/Attainment
Particulate Sulfate (State)	Attainment
Hydrogen Sulfide (State)	Unclassified (Searles Valley Planning Area is nonattainment)
Visibility Reducing Particles (State)	Unclassified

*Note: Portion of MDAQMD outside of Southeast Desert Modified AQMA is unclassified/attainment

**Note: Portion of MDAQMD outside of Western Mojave Desert Ozone Nonattainment Area is unclassifiable/attainment

Attainment Plans

The District has adopted a variety of attainment plans for a variety of nonattainment pollutants. Please refer to Table 2 for a chart of these attainment plans.

Table 2 – MDAQMD Attainment Plans

Name of Plan	Date of Adoption	Standard(s) Targeted	Applicable Area	Pollutant(s) Targeted	Attainment Date*
MDAQMD Federal 75 ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Area)	27-Feb-17	Federal eight hour ozone (75 ppb)	Western Mojave Desert Nonattainment Area (MDAQMD portion)	NO _x and VOC	2027
Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Nonattainment Area)	9-Jun-08	Federal eight hour ozone (84 ppb)	Western Mojave Desert Nonattainment Area (MDAQMD portion)	NO _x and VOC	2019 (revised from 2021)
2004 Ozone Attainment Plan (State and Federal)	26-Apr-04	Federal one hour ozone	Entire District	NO _x and VOC	2007
Attainment Demonstration, Maintenance Plan, and Redesignation Request for the Trona Portion of the Searles Valley PM ₁₀ Non-attainment Area	25-Mar-96	Federal daily and annual PM ₁₀	Searles Valley Planning Area	PM ₁₀	N/A
Triennial Revision to the 1991 Air Quality Attainment Plan	22-Jan-96	State one hour ozone	Entire District	NO _x and VOC	2005
Mojave Desert Planning Area Federal Particulate Matter Attainment Plan	31-Jul-95	Federal daily and annual PM ₁₀	Mojave Desert Planning Area	PM ₁₀	2000
Searles Valley PM ₁₀ Plan	28-Jun-95	Federal daily and annual PM ₁₀	Searles Valley Planning Area	PM ₁₀	1994
Post 1996 Attainment Demonstration and Reasonable Further Progress Plan	26-Oct-94	Federal one hour ozone	Southeast Desert Modified AQMA	NO _x and VOC	2007
Reasonable Further Progress Rate-Of-Progress Plan	26-Oct-94	Federal one hour ozone	Southeast Desert Modified AQMA	NO _x and VOC	2007

Name of Plan	Date of Adoption	Standard(s) Targeted	Applicable Area	Pollutant(s) Targeted	Attainment Date*
1991 Air Quality Attainment Plan	26-Aug-91	State one hour ozone	San Bernardino County portion	NO _x and VOC	1994

*Note: A historical attainment date given in an attainment plan does not necessarily mean that the affected area has been re-designated to attainment; please refer to Table 1.

Rules and Regulations

The District maintains a set of Rules and Regulations to improve air quality and maintain good air quality. Please visit www.mdaqmd.ca.gov.

Recommended Environmental Setting Elements

Air Quality Data

The District gathers a variety of air quality data from a variety of monitoring sites (from the USMC AGCC site on contract). Table 3 details the data available from the District for each monitoring site. Each site with current PM₁₀ monitoring is operating a Beta Attenuation Monitor (or BAM) with realtime hourly data, and BAMs replaced TEOMs and Hi-Vols beginning in 2011.

Table 3 - Available Air Quality Data

Site	Address	Pollutants	Dates
Barstow	225 E. Mountain View	O ₃ , NO _x , CO, PM ₁₀	5/1/80 to present
Hesperia	17288 Olive	O ₃ , PM ₁₀	1/2/86 to present
Lucerne Valley	8560 Aliento Road	PM ₁₀	6/1/89 to present
Phelan	Beekley and Phelan Road	O ₃	1/1/88 to present
Trona	Market Street	O ₃ , NO _x , SO ₂ , H ₂ S, PM ₁₀	8/1//80 to 2/13/93
Trona	Athol Street	O ₃ , NO _x , SO ₂ , H ₂ S, PM ₁₀	1/25/93 to 3/1997
Trona	Telescope	O ₃ , NO _x , SO ₂ , H ₂ S, PM ₁₀	4/1997 to present
Twentynine Palms	6136 Adobe Road	O ₃ , NO _x , SO ₂ , CO, PM ₁₀	8/1/80 to 12/2005
Victorville	County Fairgrounds	O ₃ , NO _x , SO ₂ , CO, TSP	8/1980 to 12/1985
Victorville	Eighth Street	O ₃ , NO _x , SO ₂ , CO, TSP	1/1985 to 12/1989
Victorville	County Fairgrounds	O ₃ , NO _x , SO ₂ , CO, PM ₁₀	1/1990 to 4/1991
Victorville	14029 Amargosa Rd	O ₃ , NO _x , SO ₂ , CO, PM ₁₀	4/1991 to 12/1999
Victorville	14306 Park Avenue	O ₃ , NO _x , SO ₂ , CO, PM _{2.5} (dual co-located), PM ₁₀	1/2000 to present

Meteorological Data

A variety of meteorological data is available from the District for several monitoring sites

throughout the District. Table 4 contains a list of monitoring sites and the date range the following data is available for: wind speed (hourly average and peak), wind direction, temperature, barometric pressure, and relative humidity.

Table 4 - Available Meteorological Data

Site	Address	Dates
Barstow	225 E. Mountain View	1/1988 to present
Hesperia	17288 Olive Street	1/1988 to present
Lucerne Valley	8560 Aliento Road	3/2020 to present
Phelan	Beekley and Phelan Road	1/88 to present
Trona	Athol Street	2/1993 to 3/1997
Trona	Telescope	4/1997 to present
Twentynine Palms	6136 Adobe Road	1/1988 to 12/2005
Victorville	14029 Amargosa Road	4/91 to 12/1999
Victorville	14306 Park Avenue	1/2000 to present

Topography and Climate Discussion

The District covers the majority of the Mojave Desert Air Basin (MDAB). The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains which dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi Mountains, separated from the Sierra Nevadas in the north by the Tehachapi Pass (3,800 ft elevation). The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 ft). The Mojave Desert is bordered in the southwest by the San Bernardino Mountains, separated from the San Gabriels by the Cajon Pass (4,200 ft). A lesser channel lies between the San Bernardino Mountains and the Little San Bernardino Mountains (the Morongo Valley).

The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley) whose primary channel is the San Gorgonio Pass (2,300 ft) between the San Bernardino and San Jacinto Mountains.

During the summer the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. As can be seen from Table 5, the MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inches of precipitation). The MDAB is classified as a dry-hot desert

climate (BWh), with portions classified as dry-very hot desert (BWhh), to indicate at least three months have maximum average temperatures over 100.4° F.

Table 5 - MDAB Average Precipitation and Evaporation History

Location	Precipitation (inches)	Precipitation (days)	Evaporation (inches)	Length of Observations (years)
Trona	3.82	16		48
Randsburg	5.89	23		48
China Lake	4.42			34
Goldstone Echo	5.42	20		23
Daggett Airport	3.87	23		48
Barstow Fire	4.60	23		16
Barstow CIMIS	5.10	27	70	22
Granite Mountain	5.76	22		5
Victorville CIMIS	7.30	29	63	15
Mitchell Caverns	10.41	32		38
Mountain Pass	7.63	28		41
Parker Reservoir	5.38	24		48
Needles Airport	4.55	23		48
Twentynine Palms	3.95	19		48
Blythe Airport	3.57	17		48
Iron Mountain	3.40	19		48

Recommended Impacts Discussion Elements

Direct Impacts

Direct impacts are the result of the project itself (from its construction and operation), in the form of project activity and trips generated by the project. For example, in the case of a subdivision project, construction emissions (equipment exhaust, wind erosion, vehicle exhaust), housing use activity (natural gas consumption) and trips to and from the housing (vehicle exhaust, tire wear) represent direct impacts. In the case of a new mine project, construction emissions (equipment exhaust, wind erosion, vehicle exhaust), material handling (drilling, blasting, transfers, crushing, screening, bagging), operational emissions (wind erosion, vehicle travel, vehicle exhaust, tire wear), and employee/customer/delivery travel (vehicle exhaust, tire wear) represent direct impacts.

Indirect Impacts

Indirect impacts are the result of changes that would not occur without the project. In the case of a subdivision project, indirect impacts on the surrounding community can be generated in many ways: nearby construction of roadways (or roadway modifications) and other infrastructure to support the subdivision, construction and operation of new commercial/retail establishments, changes in traffic/circulation patterns that result in increased congestion/delays, etc. In the case of a new mine project, indirect impacts can be generated by nearby construction of infrastructure

to support the mine, housing constructed and/or occupied by mine employees, changes in traffic/circulation patterns that result in increased congestion/delays, etc.

Cumulative Impacts

Cumulative impacts are similar to direct and indirect impacts of the project, which the project contributes to. In the case of a subdivision project, a given project has a cumulative impact with all other subdivision projects, from the standpoint of each type of impact (cumulative construction emissions, residential natural gas consumption, solvent use, transportation emissions, congestion, etc.). Similarly, a new mine project has a cumulative impact with all other mining projects, from the standpoint of each type of impact (cumulative construction emissions, diesel equipment emissions, blasting emissions, fugitive emissions, transportation, congestion, etc.).

Conformity Impacts

A project is non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable District rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast. An example of a non-conforming project would be one that increases the gross number of dwelling units, increases the number of trips, and/or increases the overall vehicle miles traveled in an affected area (relative to the applicable land use plan).

Sensitive Receptor Land Uses

Residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number 4 (refer to the significance threshold discussion):

- Any industrial project within 1000 feet;
- A distribution center (40 or more trucks per day) within 1000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1000 feet;
- A dry cleaner using perchloroethylene within 500 feet;
- A gasoline dispensing facility within 300 feet.

Friant Ranch Decision

The MDAQMD does not currently have a methodology that would correlate the expected air quality emissions of project to the likely health consequences of those emissions. However, the MDAQMD does recommend the use of specific tools which are available (such as CalEEMod) for the purposes of project evaluation. Outside of existing tools, the MDAQMD does not currently have methodologies that would provide lead agencies and the public with a consistent, reliable and meaningful analysis to correlate specific health impacts that may result from a

proposed project’s air emissions.

Recommended Substantiation Discussion Elements

For projects applying the emissions-based significance thresholds, project emissions quantification is required. In addition the environmental documentation must include support for the quantification methodology used, including emission factors, emission factors source, assumptions, and sample calculations where necessary. For projects using a calculation tool such as CalEEMod or URBEMIS, the support section must specify the inputs and settings used for the evaluation.

Significance Thresholds

Any project is significant if it triggers or exceeds the most appropriate evaluation criteria. The District will clarify upon request which threshold is most appropriate for a given project; in general, the emissions comparison (criteria number 1) is sufficient:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 6;
2. Generates a violation of any ambient air quality standard when added to the local background;
3. Does not conform with the applicable attainment or maintenance plan(s) ¹;
4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.*

**Refer to the Sensitive Receptor Land Use discussion above*

A significant project must incorporate mitigation sufficient to reduce its impact to a level that is not significant. A project that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation. Note that the emission thresholds are given as a daily value and an annual value, so that multi-phased project (such as project with a construction phase and a separate operational phase) with phases shorter than one year can be compared to the daily value.

Table 6 – Significant Emissions Thresholds

Criteria Pollutant	Annual Threshold (short tons)	Daily Threshold (pounds)
Greenhouse Gases (CO ₂ e)	100,000	548,000
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO _x)	25	137
Volatile Organic Compounds (VOC)	25	137
Oxides of Sulfur (SO _x)	25	137
Particulate Matter (PM ₁₀)	15	82

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.

Criteria Pollutant	Annual Threshold (short tons)	Daily Threshold (pounds)
Particulate Matter (PM _{2.5})	12	65
Hydrogen Sulfide (H ₂ S)	10	54
Lead (Pb)	0.6	3

District Contacts

If an address is not listed, use the general address for the District, to the attention of the listed individual.

Mojave Desert Air Quality Management District General	(760) 245-1661 14306 Park Avenue Victorville, CA 92392-2310
Planning and Rules	Tracy Walters (760) 245-1661 x6122
Air Quality and Meteorological Data	Chris Collins (760) 245-1661 x6282
CEQA and Conformity	Alan De Salvio (760) 245-1661 x6726
Permitting	Sheri Haggard (760) 245-1661 x1864

Appendix A – Basic Definitions of Major Air Pollutants

Technical and/or legal definitions exist for many of these pollutants, depending on context. The following definitions are for general, introductory purposes only:

Carbon Dioxide (CO₂) – Common product of combustion. Not a criteria pollutant, but considered an important greenhouse gas. Important on a national or global scale.

Carbon Monoxide (CO) – Common product of incomplete combustion. A criteria pollutant with state and federal standards. Not a primary photochemical reaction compound, but involved in photochemical reactions. Dissipates rapidly, and is therefore only important on a local scale near sources.

Criteria Pollutants – Those air pollutants specifically identified for control under the Federal Clean Air Act (currently six: carbon monoxide, nitrogen oxides, lead, sulfur oxides, ozone and particulates).

Lead (Pb) – A heavy metal, present in the environment mainly due to historical use in motor vehicle fuel. Primarily associated with lead smelting operations. A criteria pollutant with state and federal standards. Primarily of concern near sources.

Oxides of Nitrogen (NO_x) – Common product of combustion in the presence of nitrogen. Includes NO₂, which is a criteria pollutant with state and federal standards. Locally and regionally important due to its involvement in the photochemical formation of ozone.

Oxides of Sulfur (SO_x) – Common product of combustion in the presence of sulfur. Associated primarily with diesel and coal burning. Includes SO₂, a criteria pollutant with state and federal standards. Primarily of concern near sources.

Ozone (O₃) – A gas mainly produced by a photochemical reaction between reactive organic gases and oxides of nitrogen in the presence of sunlight (also produced by molecular oxygen in the presence of ultraviolet light or electrical discharge). A strong oxidant that is damaging at ground level but necessary at high altitude (in the stratosphere, where it absorbs dangerous ultraviolet light). Also considered an important greenhouse gas. A criteria pollutant with state and federal standards.

Particulate Matter (TSP or PM₃₀) – Solid or liquid matter suspended in the atmosphere, excluding water. Includes aerosols and droplets that form in the atmosphere. Locally and regionally important.

Reactive/Volatile Organic Compounds/Gases (ROG, VOC, NMOG, NMOC) – A portion of total organic compounds or gases, excludes methane, ethane and acetone (due to low photochemical reactivity). “ROG” is generally used by the California Air Resources Board, “VOC” is generally used by the United States Environmental Protection Agency, but all four terms are interchangeable for most uses. Regionally important due to its involvement in the photochemical reaction that produces ozone.

Respirable Particulate Matter (coarse or PM₁₀, and fine or PM_{2.5}) – That portion of particulate matter that tends to penetrate into the human lung. The subscript refers to aerodynamic diameter. Criteria pollutants with state and federal standards. Locally and regionally important.

Total Organic Compounds/Gases (TOC or TOG) – Compounds containing at least one atom of carbon, except carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and metallic carbonates. Primarily methane in the atmosphere, a greenhouse gas.

ATTACHMENT B – CalEEMod Emissions Model Output

Air Quality Study - TTM 20576 Housing Development, Victorville, CA Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Air Quality Study - TTM 20576 Housing Development, Victorville, CA
Construction Start Date	11/4/2024
Operational Year	2030
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	Cataba Rd & Mesa St, Victorville, CA 92392, USA
County	San Bernardino-Mojave Desert
City	Victorville
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.20

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
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Single Family Housing	244	Dwelling Unit	52.2	536,800	1,680,912	—	808	—
Other Asphalt Surfaces	14.8	Acre	14.8	0.00	0.00	—	—	—
Other Non-Asphalt Surfaces	3.80	Acre	3.80	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	49.3	30.5	30.1	0.07	1.25	2.82	4.06	1.15	1.05	2.20	—	7,503	7,503	0.28	0.17	7,561
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	49.2	36.1	34.0	0.07	1.60	5.34	6.94	1.47	2.68	4.15	—	7,488	7,488	0.28	0.17	7,543
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.8	13.1	15.0	0.03	0.53	1.16	1.70	0.49	0.39	0.88	—	3,493	3,493	0.13	0.12	3,524
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.96	2.38	2.74	0.01	0.10	0.21	0.31	0.09	0.07	0.16	—	578	578	0.02	0.02	583

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.32	30.5	30.1	0.07	1.25	2.82	4.06	1.15	1.05	2.20	—	7,503	7,503	0.28	0.17	7,561
2026	1.52	11.1	20.1	0.03	0.39	1.37	1.76	0.36	0.33	0.69	—	4,468	4,468	0.15	0.17	4,530
2027	1.45	10.5	19.5	0.03	0.35	1.37	1.72	0.32	0.33	0.65	—	4,428	4,428	0.11	0.17	4,486
2028	1.40	9.99	19.1	0.03	0.31	1.37	1.68	0.29	0.33	0.62	—	4,385	4,385	0.11	0.17	4,442
2029	49.3	10.5	20.8	0.03	0.30	1.60	1.90	0.28	0.38	0.66	—	4,711	4,711	0.12	0.17	4,770
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.73	36.1	34.0	0.07	1.60	5.34	6.94	1.47	2.68	4.15	—	7,488	7,488	0.28	0.16	7,543
2025	3.30	30.5	29.6	0.07	1.25	2.82	4.06	1.15	1.05	2.20	—	7,471	7,471	0.28	0.17	7,526
2026	1.47	11.1	17.8	0.03	0.39	1.37	1.76	0.36	0.33	0.69	—	4,325	4,325	0.12	0.17	4,380
2027	1.41	10.6	17.5	0.03	0.35	1.37	1.72	0.32	0.33	0.65	—	4,288	4,288	0.12	0.17	4,341
2028	1.36	10.1	17.2	0.03	0.31	1.37	1.68	0.29	0.33	0.62	—	4,247	4,247	0.11	0.17	4,300
2029	49.2	10.5	18.7	0.03	0.30	1.60	1.90	0.28	0.38	0.66	—	4,550	4,550	0.12	0.17	4,604
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.44	4.23	3.99	0.01	0.19	0.61	0.79	0.17	0.30	0.47	—	665	665	0.03	0.01	668
2025	1.59	13.1	15.0	0.03	0.53	1.16	1.70	0.49	0.39	0.88	—	3,493	3,493	0.13	0.09	3,524
2026	1.06	7.98	13.1	0.02	0.28	0.98	1.26	0.26	0.24	0.49	—	3,112	3,112	0.08	0.12	3,153
2027	1.01	7.60	12.8	0.02	0.25	0.98	1.23	0.23	0.24	0.47	—	3,085	3,085	0.08	0.12	3,125
2028	0.98	7.24	12.6	0.02	0.22	0.98	1.20	0.21	0.24	0.44	—	3,064	3,064	0.08	0.12	3,103
2029	10.8	6.78	12.2	0.02	0.20	0.98	1.18	0.18	0.24	0.42	—	2,957	2,957	0.08	0.11	2,993
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	0.08	0.77	0.73	< 0.005	0.03	0.11	0.14	0.03	0.06	0.09	—	110	110	< 0.005	< 0.005	111
2025	0.29	2.38	2.74	0.01	0.10	0.21	0.31	0.09	0.07	0.16	—	578	578	0.02	0.01	583
2026	0.19	1.46	2.40	< 0.005	0.05	0.18	0.23	0.05	0.04	0.09	—	515	515	0.01	0.02	522
2027	0.18	1.39	2.34	< 0.005	0.05	0.18	0.22	0.04	0.04	0.08	—	511	511	0.01	0.02	517
2028	0.18	1.32	2.30	< 0.005	0.04	0.18	0.22	0.04	0.04	0.08	—	507	507	0.01	0.02	514
2029	1.96	1.24	2.22	< 0.005	0.04	0.18	0.22	0.03	0.04	0.08	—	490	490	0.01	0.02	496

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	22.7	9.05	81.3	0.18	0.28	15.3	15.6	0.27	3.88	4.15	147	22,735	22,882	15.7	0.80	23,555
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	20.5	9.46	53.3	0.17	0.28	15.3	15.6	0.27	3.88	4.15	147	21,200	21,347	15.7	0.82	21,990
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	20.9	9.51	63.1	0.17	0.28	15.0	15.2	0.27	3.79	4.06	147	21,202	21,349	15.7	0.82	22,005
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.82	1.74	11.5	0.03	0.05	2.73	2.78	0.05	0.69	0.74	24.3	3,510	3,535	2.60	0.14	3,643

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	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.81	6.99	66.6	0.17	0.12	15.3	15.4	0.11	3.88	3.99	—	17,179	17,179	0.56	0.72	17,448
Area	13.7	0.13	13.9	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	37.0	37.0	< 0.005	< 0.005	37.1
Energy	0.11	1.93	0.82	0.01	0.16	—	0.16	0.16	—	0.16	—	5,153	5,153	0.38	0.02	5,170
Water	—	—	—	—	—	—	—	—	—	—	19.5	366	386	2.02	0.05	451
Waste	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	445
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.84
Total	22.7	9.05	81.3	0.18	0.28	15.3	15.6	0.27	3.88	4.15	147	22,735	22,882	15.7	0.80	23,555
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.85	7.53	52.5	0.15	0.12	15.3	15.4	0.11	3.88	3.99	—	15,681	15,681	0.59	0.75	15,920
Area	12.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.11	1.93	0.82	0.01	0.16	—	0.16	0.16	—	0.16	—	5,153	5,153	0.38	0.02	5,170
Water	—	—	—	—	—	—	—	—	—	—	19.5	366	386	2.02	0.05	451
Waste	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	445
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.84
Total	20.5	9.46	53.3	0.17	0.28	15.3	15.6	0.27	3.88	4.15	147	21,200	21,347	15.7	0.82	21,990
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.71	7.52	55.4	0.15	0.12	15.0	15.1	0.11	3.79	3.90	—	15,664	15,664	0.59	0.74	15,917
Area	13.1	0.06	6.85	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.3	18.3	< 0.005	< 0.005	18.3
Energy	0.11	1.93	0.82	0.01	0.16	—	0.16	0.16	—	0.16	—	5,153	5,153	0.38	0.02	5,170
Water	—	—	—	—	—	—	—	—	—	—	19.5	366	386	2.02	0.05	451
Waste	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	445
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.84
Total	20.9	9.51	63.1	0.17	0.28	15.0	15.2	0.27	3.79	4.06	147	21,202	21,349	15.7	0.82	22,005

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.41	1.37	10.1	0.03	0.02	2.73	2.75	0.02	0.69	0.71	—	2,593	2,593	0.10	0.12	2,635
Area	2.40	0.01	1.25	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.02	3.02	< 0.005	< 0.005	3.03
Energy	0.02	0.35	0.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	853	853	0.06	< 0.005	856
Water	—	—	—	—	—	—	—	—	—	—	3.23	60.6	63.9	0.33	0.01	74.7
Waste	—	—	—	—	—	—	—	—	—	—	21.0	0.00	21.0	2.10	0.00	73.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.64
Total	3.82	1.74	11.5	0.03	0.05	2.73	2.78	0.05	0.69	0.74	24.3	3,510	3,535	2.60	0.14	3,643

3. Construction Emissions Details

3.1. Site Preparation (2024) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	0.40	3.94	3.61	0.01	0.18	—	0.18	0.16	—	0.16	—	580	580	0.02	< 0.005	582
Dust From Material Movement	—	—	—	—	—	0.56	0.56	—	0.29	0.29	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.72	0.66	< 0.005	0.03	—	0.03	0.03	—	0.03	—	96.1	96.1	< 0.005	< 0.005	96.4
Dust From Material Movement	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.11	1.06	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	234
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.0	26.0	< 0.005	< 0.005	26.4
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.31	4.31	< 0.005	< 0.005	4.37

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
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

3.3. Grading (2024) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.27	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.6	51.6	< 0.005	< 0.005	51.8
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.55	8.55	< 0.005	< 0.005	8.58

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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.12	1.21	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	264	264	0.01	0.01	267
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.74	0.16	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	626	626	< 0.005	0.10	656
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.13	2.13	< 0.005	< 0.005	2.15
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
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.90	4.90	< 0.005	< 0.005	5.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	0.36
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.81	0.81	< 0.005	< 0.005	0.85

3.5. Grading (2025) - Unmitigated

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

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

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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	6,622
Dust From Material Movement	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	6,622
Dust From Material Movement	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	8.71	8.31	0.02	0.36	—	0.36	0.33	—	0.33	—	1,937	1,937	0.08	0.02	1,944
Dust From Material Movement	—	—	—	—	—	0.70	0.70	—	0.28	0.28	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.59	1.52	< 0.005	0.07	—	0.07	0.06	—	0.06	—	321	321	0.01	< 0.005	322
Dust From Material Movement	—	—	—	—	—	0.13	0.13	—	0.05	0.05	—	—	—	—	—	—

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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	1.66	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	292	292	0.01	0.01	296
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
Hauling	0.01	0.68	0.15	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	613	613	< 0.005	0.10	643
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.11	1.11	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.72	0.15	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	613	613	< 0.005	0.10	643
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	78.0	78.0	< 0.005	< 0.005	79.1
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
Hauling	< 0.005	0.21	0.04	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	180	180	< 0.005	0.03	189
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.9	12.9	< 0.005	< 0.005	13.1
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
Hauling	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.8	29.8	< 0.005	< 0.005	31.2

3.7. Building Construction (2025) - Unmitigated

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

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

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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	2.25	2.81	0.01	0.09	—	0.09	0.09	—	0.09	—	516	516	0.02	< 0.005	518
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.41	0.51	< 0.005	0.02	—	0.02	0.02	—	0.02	—	85.5	85.5	< 0.005	< 0.005	85.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.48	0.43	7.29	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,281	1,281	0.05	0.04	1,300
Vendor	0.03	0.84	0.37	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	831	831	< 0.005	0.11	866
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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.47	4.90	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,134	1,134	0.06	0.04	1,149
Vendor	0.03	0.89	0.38	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	832	832	< 0.005	0.11	865
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.11	1.18	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	251	251	0.01	0.01	255
Vendor	0.01	0.19	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	179	179	< 0.005	0.02	186
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.22	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	41.6	41.6	< 0.005	< 0.005	42.2
Vendor	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.6	29.6	< 0.005	< 0.005	30.8
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

3.9. Building Construction (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.39	6.78	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,256	1,256	0.05	0.04	1,274
Vendor	0.03	0.81	0.34	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	815	815	< 0.005	0.11	850
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.43	4.51	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,112	1,112	0.02	0.04	1,126
Vendor	0.03	0.86	0.35	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	816	816	< 0.005	0.11	849
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.33	3.63	0.00	0.00	0.82	0.82	0.00	0.19	0.19	—	818	818	0.01	0.03	829
Vendor	0.02	0.61	0.25	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	582	582	< 0.005	0.08	607

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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.66	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	135	135	< 0.005	0.01	137
Vendor	< 0.005	0.11	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	96.4	96.4	< 0.005	0.01	100
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

3.11. Building Construction (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.40	0.35	6.26	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,234	1,234	0.01	0.04	1,251
Vendor	0.03	0.79	0.33	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	797	797	< 0.005	0.10	830
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.39	4.21	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,093	1,093	0.02	0.04	1,107
Vendor	0.02	0.83	0.34	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	798	798	< 0.005	0.11	829
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26	0.30	3.36	0.00	0.00	0.82	0.82	0.00	0.19	0.19	—	804	804	0.01	0.03	815
Vendor	0.02	0.59	0.24	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	569	569	< 0.005	0.08	592
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.61	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	133	133	< 0.005	0.01	135
Vendor	< 0.005	0.11	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	94.3	94.3	< 0.005	0.01	98.1
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

3.13. Building Construction (2028) - 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	CO2e
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Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	1,723
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	285
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.31	5.83	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,211	1,211	0.01	0.04	1,227
Vendor	0.02	0.76	0.31	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	776	776	< 0.005	0.10	809
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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.35	3.90	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,073	1,073	0.02	0.04	1,086
Vendor	0.02	0.80	0.32	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	777	777	< 0.005	0.10	808
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.28	3.13	0.00	0.00	0.82	0.82	0.00	0.19	0.19	—	791	791	0.01	0.03	801
Vendor	0.02	0.57	0.23	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	556	556	< 0.005	0.08	579
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.57	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	131	131	< 0.005	< 0.005	133
Vendor	< 0.005	0.10	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	92.1	92.1	< 0.005	0.01	95.9
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

3.15. Building Construction (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	5.84	8.79	0.02	0.19	—	0.19	0.17	—	0.17	—	1,632	1,632	0.07	0.01	1,638
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.07	1.60	< 0.005	0.03	—	0.03	0.03	—	0.03	—	270	270	0.01	< 0.005	271
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.31	5.43	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,189	1,189	0.01	0.04	1,205
Vendor	0.02	0.73	0.30	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	755	755	< 0.005	0.10	786
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.31	3.64	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,053	1,053	0.02	0.04	1,066
Vendor	0.02	0.78	0.31	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	755	755	< 0.005	0.10	785
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.23	2.77	0.00	0.00	0.78	0.78	0.00	0.18	0.18	—	738	738	0.01	0.03	748
Vendor	0.02	0.53	0.21	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	514	514	< 0.005	0.07	535

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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.51	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	122	122	< 0.005	< 0.005	124
Vendor	< 0.005	0.10	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	85.1	85.1	< 0.005	0.01	88.5
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

3.17. Paving (2025) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	1,517
Paving	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.53	2.05	< 0.005	0.07	—	0.07	0.07	—	0.07	—	311	311	0.01	< 0.005	312
Paving	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.28	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	51.6

Paving	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	1.25	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	219	219	0.01	0.01	222
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.0	41.0	< 0.005	< 0.005	41.5
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.78	6.78	< 0.005	< 0.005	6.88
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
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

3.19. Architectural Coating (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	134
Architectural Coatings	47.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	134
Architectural Coatings	47.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.4	27.4	< 0.005	< 0.005	27.5
Architectural Coatings	9.82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.54	4.54	< 0.005	< 0.005	4.56
Architectural Coatings	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	1.09	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	238	238	< 0.005	0.01	241
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.73	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	211	211	< 0.005	0.01	213
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.17	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.6	44.6	< 0.005	< 0.005	45.1
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.38	7.38	< 0.005	< 0.005	7.47
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
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

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	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	8.81	6.99	66.6	0.17	0.12	15.3	15.4	0.11	3.88	3.99	—	17,179	17,179	0.56	0.72	17,448
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	8.81	6.99	66.6	0.17	0.12	15.3	15.4	0.11	3.88	3.99	—	17,179	17,179	0.56	0.72	17,448
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	7.85	7.53	52.5	0.15	0.12	15.3	15.4	0.11	3.88	3.99	—	15,681	15,681	0.59	0.75	15,920
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	7.85	7.53	52.5	0.15	0.12	15.3	15.4	0.11	3.88	3.99	—	15,681	15,681	0.59	0.75	15,920
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.41	1.37	10.1	0.03	0.02	2.73	2.75	0.02	0.69	0.71	—	2,593	2,593	0.10	0.12	2,635
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Total	1.41	1.37	10.1	0.03	0.02	2.73	2.75	0.02	0.69	0.71	—	2,593	2,593	0.10	0.12	2,635
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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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2,706	2,706	0.17	0.02	2,716
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2,706	2,706	0.17	0.02	2,716
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2,706	2,706	0.17	0.02	2,716
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2,706	2,706	0.17	0.02	2,716

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	448	448	0.03	< 0.005	450
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	448	448	0.03	< 0.005	450

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.11	1.93	0.82	0.01	0.16	—	0.16	0.16	—	0.16	—	2,447	2,447	0.22	< 0.005	2,454
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.11	1.93	0.82	0.01	0.16	—	0.16	0.16	—	0.16	—	2,447	2,447	0.22	< 0.005	2,454
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.11	1.93	0.82	0.01	0.16	—	0.16	0.16	—	0.16	—	2,447	2,447	0.22	< 0.005	2,454

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.11	1.93	0.82	0.01	0.16	—	0.16	0.16	—	0.16	—	2,447	2,447	0.22	< 0.005	2,454
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.02	0.35	0.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	405	405	0.04	< 0.005	406
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.02	0.35	0.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	405	405	0.04	< 0.005	406

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	11.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscap e	1.20	0.13	13.9	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	37.0	37.0	< 0.005	< 0.005	37.1
Total	13.7	0.13	13.9	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	37.0	37.0	< 0.005	< 0.005	37.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	11.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	12.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscap e Equipmen t	0.11	0.01	1.25	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.02	3.02	< 0.005	< 0.005	3.03
Total	2.40	0.01	1.25	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.02	3.02	< 0.005	< 0.005	3.03

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	19.5	366	386	2.02	0.05	451
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	19.5	366	386	2.02	0.05	451
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	19.5	366	386	2.02	0.05	451
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	19.5	366	386	2.02	0.05	451
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	3.23	60.6	63.9	0.33	0.01	74.7
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	3.23	60.6	63.9	0.33	0.01	74.7

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	445
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	445
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	445
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	127	0.00	127	12.7	0.00	445
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	21.0	0.00	21.0	2.10	0.00	73.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	21.0	0.00	21.0	2.10	0.00	73.6

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.84
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.84
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.84
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.84
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.64
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.64

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	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	CO2e
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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	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	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	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	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	11/04/2024	12/27/2024	5.00	40.0	—
Grading	Grading	12/28/2024	5/30/2025	5.00	110	—
Building Construction	Building Construction	9/13/2025	12/14/2029	5.00	1,110	—
Paving	Paving	6/2/2025	9/12/2025	5.00	75.0	—
Architectural Coating	Architectural Coating	9/3/2029	12/14/2029	5.00	75.0	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	8.98	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	87.8	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	26.1	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	17.6	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,087,020	362,340	0.00	0.00	48,613

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)
Site Preparation	0.00	0.00	60.0	0.00	—
Grading	7,900	0.00	330	0.00	—

Paving	0.00	0.00	0.00	0.00	21.3
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5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	2.69	0%
Other Asphalt Surfaces	14.8	100%
Other Non-Asphalt Surfaces	3.80	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005
2028	0.00	532	0.03	< 0.005
2029	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
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Single Family Housing	2,303	2,328	2,086	830,675	21,496	21,723	19,469	7,752,064
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	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

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)
1087020	362,340	0.00	0.00	48,613

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)
Single Family Housing	1,856,748	532	0.0330	0.0040	7,634,691

Other Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	532	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)
Single Family Housing	10,170,207	45,482,473
Other Asphalt Surfaces	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	236	—
Other Asphalt Surfaces	0.00	—
Other Non-Asphalt Surfaces	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
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

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
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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
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5.16.2. Process Boilers

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

Equipment Type	Fuel Type
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5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

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

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	33.0	annual days of extreme heat
Extreme Precipitation	2.15	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	7.99	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
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Temperature and Extreme Heat	4	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	4	1	1	4
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	91.1
AQ-PM	32.2
AQ-DPM	57.9
Drinking Water	29.7
Lead Risk Housing	13.8
Pesticides	0.00
Toxic Releases	25.0
Traffic	83.1
Effect Indicators	—
CleanUp Sites	73.4
Groundwater	0.00
Haz Waste Facilities/Generators	65.9
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	84.6
Cardio-vascular	99.5
Low Birth Weights	5.81
Socioeconomic Factor Indicators	—

Education	67.1
Housing	11.2
Linguistic	19.9
Poverty	67.2
Unemployment	82.7

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	66.22610035
Employed	25.70255357
Median HI	56.85871936
Education	—
Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—
2-parent households	97.98537149
Voting	43.48774541
Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422

Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9
Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0
Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3
Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5

Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0
Healthy Places Index Score for Project Location (b)	42.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No

Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Information is provided by the client.
Construction: Construction Phases	An estimated start date of 11/04/2024 was provided by client. Since project is a housing development, assumed all paving was conducted prior to building construction. For architectural coating phase, assumed CalEEMod default number of days and assumed overlap with end of building construction phase.
Operations: Hearths	Based on client input, no woodstoves or fireplaces will be installed.

December 7, 2023

Mr. Tim Roofian, Esq.
Real Estate Development Associate
Rodeo Credit Enterprises, LLC
9595 Wilshire Blvd, Suite #708
Beverly Hills, CA 90212

Subject:
TTM 20576 – Greenhouse Gas Consistency Evaluation, City of Victorville, CA

Dear Mr. Roofian:

MD Acoustics, LLC (MD) has completed a Greenhouse Gas Consistency Evaluation for the proposed TTM 20576 Project located at the SWC of Verano Street & Cataba Road (APNs: 3136-441-01, 02 and 3136-411-04, 05) in the City of Victorville, County of San Bernardino, CA. The purpose of this focused study is to evaluate the greenhouse gas impact generated by the proposed project and to compare the project emissions to the City's Greenhouse Gas Emissions Screening Table.

The project proposes to develop 242 residential lots on approximately 70.8 acres. The proposed project site plan is in Appendix A.

The City of Victorville requires projects subject to CEQA to complete the City's Greenhouse Gas Emissions Screening Table Review in order to ensure compliance with the City's goals. The City requires projects to reach a minimum of 100 points based on project design features to be compliant. As shown in Appendix B, the project would earn 100 points by implementing the selected features highlighted in yellow. Therefore, with the selected project features, the project would be compliant and would have a less than significant impact in regards to greenhouse gas emissions.

MD is pleased to provide this Greenhouse Gas Consistency Evaluation. If you have any questions regarding this analysis, please don't hesitate to call us at (805) 426-4477.

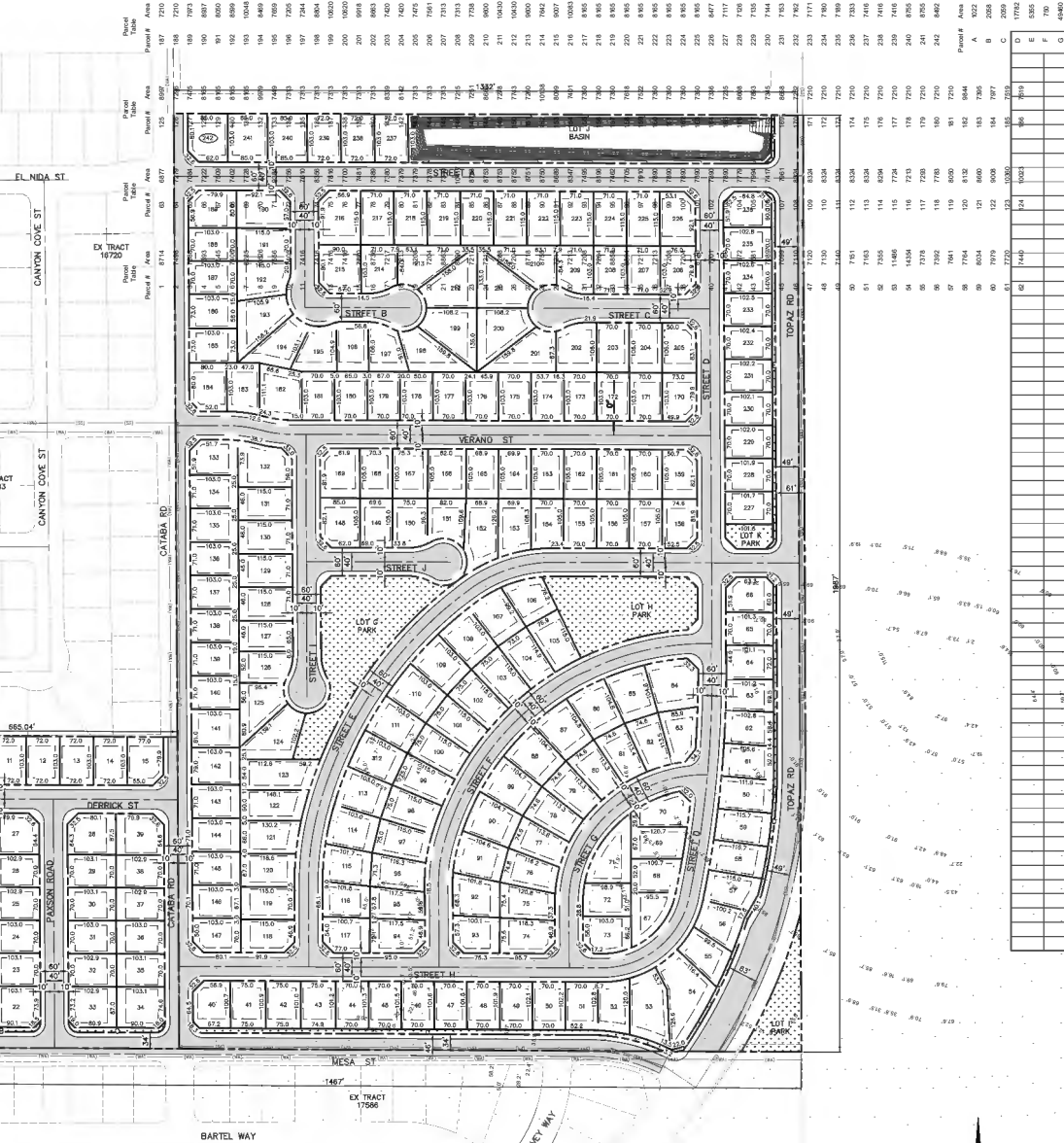
Sincerely,
MD Acoustics, LLC



Tyler Klassen, EIT
Air Quality Specialist

Appendix A
Site Plan

IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA
TENTATIVE TRACT MAP 20576



Parcel #	Area	Parcel #	Area	Parcel #	Area	Parcel #	Area
187	7210	125	8097	171	7253	155	7359
188	7210	126	8097	172	7253	156	7359
189	7210	127	8097	173	7253	157	7359
190	8807	128	8097	174	7253	158	7359
191	8807	129	8097	175	7253	159	7359
192	8807	130	8097	176	7253	160	7359
193	8807	131	8097	177	7253	161	7359
194	8809	132	8097	178	7253	162	7359
195	7205	133	8097	179	7253	163	7359
196	7205	134	8097	180	7253	164	7359
197	7244	135	8097	181	7253	165	7359
198	8804	136	8097	182	7253	166	7359
199	10020	137	8097	183	7253	167	7359
200	10020	138	8097	184	7253	168	7359
201	9915	139	8097	185	7253	169	7359
202	9915	140	8097	186	7253	170	7359
203	9915	141	8097	187	7253	171	7359
204	7420	142	8097	188	7253	172	7359
205	7475	143	8097	189	7253	173	7359
206	7591	144	8097	190	7253	174	7359
207	7313	145	8097	191	7253	175	7359
208	7313	146	8097	192	7253	176	7359
209	7235	147	8097	193	7253	177	7359
210	6860	148	8097	194	7253	178	7359
211	10020	149	8097	195	7253	179	7359
212	10020	150	8097	196	7253	180	7359
213	10020	151	8097	197	7253	181	7359
214	7462	152	8097	198	7253	182	7359
215	8007	153	8097	199	7253	183	7359
216	10083	154	8097	200	7253	184	7359
217	8785	155	8097	201	7253	185	7359
218	8785	156	8097	202	7253	186	7359
219	8785	157	8097	203	7253	187	7359
220	8785	158	8097	204	7253	188	7359
221	8785	159	8097	205	7253	189	7359
222	8785	160	8097	206	7253	190	7359
223	8785	161	8097	207	7253	191	7359
224	8785	162	8097	208	7253	192	7359
225	8785	163	8097	209	7253	193	7359
226	8677	164	8097	210	7253	194	7359
227	7117	165	8097	211	7253	195	7359
228	7395	166	8097	212	7253	196	7359
229	7395	167	8097	213	7253	197	7359
230	7444	168	8097	214	7253	198	7359
231	7425	169	8097	215	7253	199	7359
232	7425	170	8097	216	7253	200	7359
233	7471	171	8097	217	7253	201	7359
234	7471	172	8097	218	7253	202	7359
235	7471	173	8097	219	7253	203	7359
236	7333	174	8097	220	7253	204	7359
237	7416	175	8097	221	7253	205	7359
238	7416	176	8097	222	7253	206	7359
239	7416	177	8097	223	7253	207	7359
240	8726	178	8097	224	7253	208	7359
241	8726	179	8097	225	7253	209	7359
242	8462	180	8097	226	7253	210	7359
243	8462	181	8097	227	7253	211	7359
244	8462	182	8097	228	7253	212	7359
245	8462	183	8097	229	7253	213	7359
246	8462	184	8097	230	7253	214	7359
247	8462	185	8097	231	7253	215	7359
248	8462	186	8097	232	7253	216	7359
249	8462	187	8097	233	7253	217	7359
250	8462	188	8097	234	7253	218	7359
251	8462	189	8097	235	7253	219	7359
252	8462	190	8097	236	7253	220	7359
253	8462	191	8097	237	7253	221	7359
254	8462	192	8097	238	7253	222	7359
255	8462	193	8097	239	7253	223	7359
256	8462	194	8097	240	7253	224	7359
257	8462	195	8097	241	7253	225	7359
258	8462	196	8097	242	7253	226	7359
259	8462	197	8097	243	7253	227	7359
260	8462	198	8097	244	7253	228	7359
261	8462	199	8097	245	7253	229	7359
262	8462	200	8097	246	7253	230	7359
263	8462	201	8097	247	7253	231	7359
264	8462	202	8097	248	7253	232	7359
265	8462	203	8097	249	7253	233	7359
266	8462	204	8097	250	7253	234	7359
267	8462	205	8097	251	7253	235	7359
268	8462	206	8097	252	7253	236	7359
269	8462	207	8097	253	7253	237	7359
270	8462	208	8097	254	7253	238	7359
271	8462	209	8097	255	7253	239	7359
272	8462	210	8097	256	7253	240	7359
273	8462	211	8097	257	7253	241	7359
274	8462	212	8097	258	7253	242	7359
275	8462	213	8097	259	7253	243	7359
276	8462	214	8097	260	7253	244	7359
277	8462	215	8097	261	7253	245	7359
278	8462	216	8097	262	7253	246	7359
279	8462	217	8097	263	7253	247	7359
280	8462	218	8097	264	7253	248	7359
281	8462	219	8097	265	7253	249	7359
282	8462	220	8097	266	7253	250	7359
283	8462	221	8097	267	7253	251	7359
284	8462	222	8097	268	7253	252	7359
285	8462	223	8097	269	7253	253	7359
286	8462	224	8097	270	7253	254	7359
287	8462	225	8097	271	7253	255	7359
288	8462	226	8097	272	7253	256	7359
289	8462	227	8097	273	7253	257	7359
290	8462	228	8097	274	7253	258	7359
291	8462	229	8097	275	7253	259	7359
292	8462	230	8097	276	7253	260	7359
293	8462	231	8097	277	7253	261	7359
294	8462	232	8097	278	7253	262	7359
295	8462	233	8097	279	7253	263	7359
296	8462	234	8097	280	7253	264	7359
297	8462	235	8097	281	7253	265	7359
298	8462	236	8097	282	7253	266	7359
299	8462	237	8097	283	7253	267	7359
300	8462	238	8097	284	7253	268	7359
301	8462	239	8097	285	7253	269	7359
302	8462	240	8097	286	7253	270	7359
303	8462	241	8097	287	7253	271	7359
304	8462	242	8097	288	7253	272	7359
305	8462	243	8097	289	7253	273	7359
306	8462	244	8097	290	7253	274	7359
307	8462	245	8097	291	7253	275	7359
308	8462	246	8097	292	7253	276	7359
309	8462	247	8097	293	7253	277	7359
310	8462	248	8097	294	7253	278	7359
311	8462	249	8097	295	7253	279	7359
312	8462	250	8097	296	7253	280	7359
313	8462	251	8097	297	7253	281	7359
314	8462	252	8097	298	7253	282	7359
315	8462	253	8097	299	7253	283	7359
316	8462	254	8097	300	7253	284	7359
317	8462	255	8097	301	7253	285	7359
318	8462	256	8097	302	7253	286	7359
319	8462	257	8097	303	7253	287	7359
320	8462	258	8097	304	7253	288	7359
321	8462	259	8097	305	7253	289	7359
322	8462	260	8097	306	7253	290	7359
323	8462	261	8097	307	7253	291	7359
324	8462	262	8097	308	7253	292	7359
325	8462	263	8097	309	7253	293	7359
326	8462	264	8097	310	7253	294	7359
327	8462	265	8097	311	7253	295	7359
328	8462	266	8097	312	7253	296	7359
329	8462	267	8097	313	7253	297	7359
330	8462	268	8097	314	7253	298	7359
331	8462	269	8097	315	7253	299	7359
332	8462	270	8097	316	7253	300	7359
333	8462	271	8097	317	7253	301	7359
334	8462	272	8097	318	7253	302	7359
335	8462	273	8097	319	7253	303	7359
336	8462	274	8097	320	7253	304	7359
337	8462	275	8097	321	7253	305	7359
338	8462	276	8097	322	7253	306	7359
339	8462	277	8097	323	7253	307	7359
340	8462	278	8097	324	7253	308	7359
341	8462	279	8097	325	7253	309	7359
342	8462	280	8097	326	7253	310	7359
343	8462	281	8097	327	7253	311	7359
344	8462	282	8097	328	7253	312	7359
345	8462	283	8097	329	7253	313	7359
346	8462	284	8097	330	7253	314	7359
347	8462	285	8097	331	7253	315	7359
348	8462	286	8097	332	7253	316	7359
349	8462	287	8097	333	7253	317	7359
350	8462	288	8097	334	7253	318	7359
351	8462	289	8097	335	7253	319	7359
352	8462	290	8097	3			

Appendix B

City of Victorville Greenhouse Gas Emissions Screening Table

City of Victorville Screening Table for Implementation of GHG Reduction Measures for Residential Development

Feature	Description	Assigned Point Values	Project Points
Building Envelope			
Insulation	2019 baseline (walls R-16; roof/attic R-32)	0	9
	Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38)	9	
	Greatly Enhanced Insulation (spray foam insulated walls R-18 or higher, roof/attic R-38 or higher)	11	
Windows	2019 Baseline Windows (0.3 U-factor, 0.23 solar heat gain coefficient (SHGC))	0	9
	Enhanced Window Insulation (0.28 U-factor, 0.22 SHGC)	7	
	Greatly Enhanced Window Insulation (0.28 or less U-factor, 0.22 or less SHGC)	9	
Cool Roof	2019 Standard (none)	0	6
	Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance)	6	
	Greatly Enhanced Cool Roof (CRRC Rated 0.35 aged solar reflectance, 0.75 thermal emittance)	7	
Air Filtration	Air barrier applied to exterior walls, calking, and visual inspection such as the HERS Verified Quality Insulation Installation (QII or equivalent)	6	6
	Blower Door HERS Verified Envelope Leakage or equivalent	5	5
Thermal Storage of Building	Modest Thermal Mass (10% of floor or 10% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	1	1
Building Envelope Performance Standard	Enhanced Thermal Mass (20% of floor or 20% of walls: 12" or more thick exposed concrete or masonry. No permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	2	2
Indoor Space Efficiencies			
Heating/Cooling Distribution System	Minimum Duct Insulation (R-6 required)	0	5
	Enhanced Duct Insulation (R-8)	5	
	Distribution loss reduction with inspection (HERS Verified Duct Leakage or equivalent)	7	
Space Heating/Cooling Equipment	2019 Minimum HVAC Efficiency (EER 13/75% AFUE or 7.7 HSPF)	0	4
	Improved Efficiency HVAC (EER 14/78% AFUE or 8 HSPF)	2	
	High Efficiency HVAC (EER 15/80% AFUE or 8.5 HSPF)	4	
	Very High Efficiency HVAC (EER 16/82% AFUE or 9 HSPF)	5	
Water Heaters	2019 Minimum Efficiency (0.57 Energy Factor)	0	11
	Improved Efficiency Water Heater (0.675 Energy Factor)	7	
	High Efficiency Water Heater (0.72 Energy Factor)	9	
	Very High Efficiency Water Heater (0.92 Energy Factor)	11	
	Solar Pre-heat System (0.2 Net Solar Fraction)	2	
	Enhanced Solar Pre-heat System (0.35 Net Solar Fraction)	5	
Daylighting	All peripheral rooms within building have at least one window or skylight	0	1
	All rooms within building have daylight (through use of windows, solar tubes, skylights, etc.)	1	
	All rooms daylighted	1	
Artificial Lighting	2019 Minimum (required)	0	6
	Efficient Lights (25% of in-unit fixtures considered high efficacy. High efficacy is defined as 40 lumens/watt for 15 watt or less fixtures; 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40watt)	5	
	High Efficiency Lights (50% of in-unit fixtures are high efficacy)	6	
	Very High Efficiency Lights (100% of in-unit fixtures are high efficacy)	7	
Appliances	Star Commercial Refrigerator (new)	1	1
	Energy Star Commercial Dish Washer (new)	1	1
	Energy Star Commercial Cloths Washing	1	
Miscellaneous Residential Building Efficiencies			
Building Placement	North/South alignment of building or other building placement such that the orientation of the buildings optimizes conditions for natural heating, cooling, and lighting.	3	3
Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on Jun 21st.	2	2
Energy Star Homes	EPA Energy Star for Homes (version 3 or above)	15	15
Renewable Energy			
Photovoltaic	30 percent of the power needs of the project	9	
	40 percent of the power needs of the project	12	
	50 percent of the power needs of the project	17	
	60 percent of the power needs of the project	20	
	70 percent of the power needs of the project	23	
	80 percent of the power needs of the project	25	
	90 percent of the power needs of the project	28	
	100 percent of the power needs of the project	31	
Wind Turbines	30 percent of the power needs of the project	9	
	40 percent of the power needs of the project	12	
	50 percent of the power needs of the project	17	
	60 percent of the power needs of the project	20	
	70 percent of the power needs of the project	23	
	80 percent of the power needs of the project	25	
	90 percent of the power needs of the project	28	
	100 percent of the power needs of the project	31	

Irrigation and Landscaping			
Water Efficient Landscaping	Limit conventional turf to < 25% of each lot (required)	0	5
	Limit conventional turf to < 50% of each lot	2	
	Non-conventional turf warm season turf <50% of required landscape area and/or low-water using plants allowed)	4	
	Only California Native landscape that requires no or only supplemental irrigation	5	
Water Efficient Irrigation Systems	Low precipitation spray heads< .75"/hr or drip irrigation	1	2
	Weather based irrigation control systems combined with drip irrigation (demonstrate 20 reduced water use)	2	
Recycled Water	Recycled water connection (purple pipe) to irrigation system on site	6	
Water Reuse	Gray water Reuse System collects Gray-water from clothes-washers, showers and faucets for irrigation use	12	
Potable Water			
Showers	Water Efficient Showerheads (2.0 gpm)	2	2
Toilets	Water Efficient Toilets (1.5gpm)	2	2
Faucets	Water Efficient faucets (1.28gpm)	2	2
Employment Based Trip and VMT Reduction Policy			
Bicycle Infrastructure	Provide bicycle paths within project boundaries.	TBD	
	Provide bicycle path linkages between residential and other land uses.	2	
	Provide bicycle path linkages between residential and transit.	5	
Install EV Chargers			
Electric Vehicle Recharging	Level 1 110 volt AC chargers	2 per charger	
	Level 2 240 volt AC Fast Chargers	5 per charger	
Traffic Flow Improvements			
	Signal Synchronization	1	
	Signal connected to existing ITS	3	
Total Points			100

Source: Greenhouse Gas Emissions Screening Table Review, City of Victorville Department of Development.