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Mr. Ben Golshani
Manager
VNB, LLC
Work: (213) 718-2416
E-mail: Ben@VNBLLC.com

Subject: Air Quality, Greenhouse Gas, and Noise Study for a Six-Story Mixed Use Development in Los Angeles, CA

Dear Mr. Golshani:

Yorke Engineering, LLC (Yorke) is pleased to provide this Air Quality (AQ), Greenhouse Gas (GHG), and Noise Impacts Letter Report. This report includes CalEEMod emissions estimates, criteria pollutant, GHG, and Noise analyses for the proposed six-story mixed use development in the City of Los Angeles, California (City). These evaluations will support a CEQA Categorical Exemption, Initial Study (IS), Negative Declaration (ND), or a Mitigated Negative Declaration (MND), as applicable.

PROJECT DESCRIPTION

VNB, LLC. is proposing to develop a six-story mixed use development project that includes retail, parking, and residential, to be located at 7115-31 North Van Nuys Boulevard in the City of Los Angeles, CA (the City). The proposed development is located on 47,219 square feet of land within the jurisdiction of South Coast Air Quality Management District (SCAQMD) in Los Angeles County. The six-story development will include a two-level basement parking garage with elevator, retail and parking areas on the ground floor, and residential units and amenities on the second to sixth levels. The 1.084-acre project site is located on developed land and construction will involve the demolition of two existing buildings and asphalt pavement. The building footprint will be approximately 36,000 square feet and landscaping will be approximately 11,940 square feet. The nearest sensitive receptors are apartment complexes approximately 85 feet (26 meters) west of the project site.

ASSUMPTIONS

The following lists sources of information used in developing the emission estimates for the proposed Project using the California Emissions Estimator Model[®] (CalEEMod). Not all CalEEMod defaults are listed, but some defaults which have a particularly important impact on the project are listed.

- The Applicant defined:
 - Basic project design features including size of building features, parking spaces, number of units, and landscaping, etc.;
 - Low-flow faucets, toilets, showers, and irrigation will be installed consistent with modern building codes;

- Low VOC paints will be used in compliance with SCAQMD rules; and
- During construction, any exposed soil will be watered a minimum of three times a day, as required by the SCAQMD.
- CalEEMod defaults were used for:
 - Construction equipment count, load factor, and fleet average age;
 - Architectural coating areas;
 - Operational vehicle fleet mixes; and
 - Weekend daily trip rates for the operational phase.
 - Average vehicle trip distances.

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AIR QUALITY AND GREENHOUSE GAS IMPACTS ANALYSES

In order to evaluate the potential for Air Quality and Greenhouse Gas impacts of a proposed project, quantitative significance criteria established by the local air quality agency, such as the SCAQMD, may be relied upon to make significance determinations based on mass emissions of criteria pollutants and GHGs, as presented in this report. As shown below, approval of the project would not result in any significant effects relating to air quality or greenhouse gases.

Project Emissions Estimation

The construction and operation analysis were performed using CalEEMod version 2022, the official statewide land use computer model designed to provide a uniform platform for estimating potential criteria pollutant and GHG emissions associated with both construction and operations of land use projects under CEQA. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The mobile

source emission factors used in the model – published by the California Air Resources Board (CARB) – include the Pavley standards and Low Carbon Fuel standards. The model also identifies project design features, regulatory measures, and control measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from the selected measures. CalEEMod was developed by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the SCAQMD, the Bay Area Air Quality Management District (BAAQMD), the San Joaquin Valley Air Pollution Control District (SJVAPCD), and other California air districts. Default land use data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) were provided by the various California air districts to account for local requirements and conditions. As the official assessment methodology for land use projects in California, CalEEMod is relied upon herein for construction and operational emissions quantification, which forms the basis for the impact analysis.

Based on information received from the Applicant, land use data used for CalEEMod input is presented in Table 1. The SCAQMD quantitative significance thresholds shown in Table 2 were used to evaluate project emissions impacts (SCAQMD 2019).

Table 1: Land Use Data for CalEEMod Input							
Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage (footprint)	Building Square Feet	Landscape Area (sq ft)	Description
Residential	Apartments Mid Rise	214	Dwelling Units	1.08	178,258	0	Five levels of apartment residential space
Parking	Enclosed Parking Structure with Elevator	70.56	1,000 sq. ft.	0.00	70,560	0	Two-story basement garage
Parking	Unenclosed Parking Structure with Elevator	19.47	1,000 sq. ft.	0.00	19,470	11,940	Ground level parking spaces
Retail	Strip Mall	15.80	1,000 sq. ft.	0.00	15,800	0	Ground level retail spaces
Project Site				1.08	105,830	11,940	

Sources: Applicant 2022, CalEEMod version 2022

Notes:

Electric utility: Los Angeles Department of Water & Power

Gas utility: Southern California Gas

Table 2: SCAQMD CEQA Thresholds of Significance		
Pollutant	Project Construction (lbs/day)	Project Operation (lbs/day)
ROG (VOC)	75	55
NO _x	100	55
CO	550	550
SO _x	150	150
PM ₁₀	150	150
PM _{2.5}	55	55
24-hour PM _{2.5} Increment	10.4 µg/m ³	2.5 µg/m ³
24-hour PM ₁₀ Increment	10.4 µg/m ³	2.5 µg/m ³
Annual PM ₁₀ Increment	1.0 µg/m ³ annual average	
1-hour NO ₂ Increment	0.18 ppm (state)	
Annual NO ₂ Increment	0.03 ppm (state) & 0.0534 ppm (federal)	
1-hour SO ₂ Increment	0.25 ppm (state) & 0.075 ppm (federal – 99th percentile)	
24-hour SO ₂ Increment	0.04 ppm (state)	
24-hour Sulfate Increment	25 ug/m ³ (state)	
1-hour CO Increment	20 ppm (state) & 35 ppm (federal)	
8-hour CO Increment	9.0 ppm (state/federal)	
Toxic Air Contaminants (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥10 in 1 million	
	Cancer Burden >0.5 excess cancer cases (in areas ≥1 in 1 million)	
	Chronic & Acute Hazard Index ≥1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to Rule 402	
Greenhouse Gases	10,000 MT/yr CO ₂ e for industrial facilities	
	3,000 MT/yr CO ₂ e for land use projects (draft proposal)	

Source: SCAQMD 2019, 2008b

Criteria Pollutants from Project Construction

A project's construction phase produces many types of emissions, generally PM₁₀ (including PM_{2.5}) in fugitive dust and diesel engine exhaust are the pollutants of greatest concern. Construction-related emissions can cause substantial increases in localized concentrations of PM₁₀, as well as affecting PM₁₀ compliance with ambient air quality standards on a regional basis. The use of diesel-powered construction equipment emits ozone precursors oxides of nitrogen (NO_x) and reactive organic gases (ROG), and diesel particulate matter (DPM); however, the use of diesel-powered equipment would be minimal. Use of architectural coatings and other materials associated with finishing buildings may also emit ROG and TACs. CEQA significance thresholds address the impacts of construction activity emissions on local and regional air quality. Thresholds are also provided for other potential impacts related to project construction, such as odors and TACs.

The SCAQMD's approach to CEQA analyses of fugitive dust impacts is to require implementation of effective and comprehensive dust control measures rather than to require detailed quantification of emissions. PM₁₀ emitted during construction can vary greatly depending on the level of activity,

the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors, making quantification difficult. Despite this variability in emissions, experience has shown that there are several feasible control measures that can be reasonably implemented to significantly reduce fugitive dust emissions from construction. For larger projects, the SCAQMD has determined that compliance with an approved fugitive dust control plan comprising Best Management Practices (BMPs), primarily through frequent water application, constitutes sufficient control to reduce PM₁₀ impacts to a level considered less than significant.

Criteria Pollutants from Project Operation

The term “project operations” refers to the full range of activities that can or may generate criteria pollutant, GHG, and TAC emissions when the project is functioning in its intended use. For projects, such as office parks, shopping centers, apartment buildings, residential subdivisions, and other indirect sources, motor vehicles traveling to and from the project represents the primary source of air pollutant emissions. For industrial projects and some commercial projects, equipment operation and manufacturing processes, i.e., permitted stationary sources, can be of greatest concern from an emissions standpoint. CEQA significance thresholds address the impacts of operational emission sources on local and regional air quality. Thresholds are also provided for other potential impacts related to project operations, such as odors.

Results of Criteria Emissions Analyses

Table 3 shows unmitigated and mitigated criteria construction emissions and evaluates mitigated emissions against SCAQMD significance thresholds.

Table 4 shows unmitigated and mitigated criteria operational emissions and evaluates mitigated emissions against SCAQMD significance thresholds.

As shown in Tables 3 and 4, mass emissions of criteria pollutants from construction and operation are below applicable SCAQMD significance thresholds.

PROJECTED IMPACT: Less Than Significant (LTS)

Table 3: Daily Construction Emissions Summary and Significance Evaluation				
Criteria Pollutants	Unmitigated (lbs/day)	Mitigated (lbs/day)	Threshold	Significance
ROG (VOC)	52.6	40.3	75	LTS
NO _x	19.4	19.4	100	LTS
CO	28.9	28.9	550	LTS
SO _x	0.03	0.03	150	LTS
Total PM ₁₀	8.2	3.4	150	LTS
Total PM _{2.5}	4.3	1.8	55	LTS

Sources: SCAQMD 2019, CalEEMod version 2022

Notes:

lbs/day are winter or summer maxima for planned land use

Total PM₁₀ / PM_{2.5} comprises fugitive dust plus engine exhaust

LTS - Less Than Significant

Table 4: Daily Operational Emissions Summary and Significance Evaluation				
Criteria Pollutants	Unmitigated (lbs/day)	Mitigated (lbs/day)	Threshold	Significance
ROG (VOC)	13.6	13.1	55	LTS
NO _x	6.6	6.5	55	LTS
CO	74.9	74.8	550	LTS
SO _x	0.1	0.1	150	LTS
Total PM ₁₀	4.2	4.2	150	LTS
Total PM _{2.5}	0.87	0.87	55	LTS

Sources: SCAQMD 2019, CalEEMod version 2022

Notes:

lbs/day are winter or summer maxima for planned land use

Total PM₁₀ / PM_{2.5} comprises fugitive dust plus engine exhaust

LTS - Less Than Significant

Localized Significance Threshold Analysis

The SCAQMD's Localized Significance Threshold (LST) methodology (2008a) was used to analyze the neighborhood scale impacts of NO_x, CO, PM₁₀, and PM_{2.5} associated with project-specific mass emissions. Introduced in 2003, the LST methodology was revised in 2008 to include the PM_{2.5} significance threshold methodology and update the LST mass rate lookup tables for the new 1-hour NO₂ standard.

For determining localized air quality impacts from small projects in a defined geographic source-receptor area (SRA), the LST methodology provides mass emission rate lookup tables for 1-acre, 2-acre, and 5-acre parcels by SRA. The tabulated LSTs represent the maximum mass emissions from a project that will not cause or contribute to an exceedance of state or national ambient air quality standards (CAAQS or NAAQS) for the above pollutants and were developed based on ambient concentrations of these pollutants for each SRA in the South Coast Air Basin. (SCAQMD 2008a)

For most land use projects, the highest daily emission rates occur during the site preparation and grading phases of construction; where applicable, these maximum daily emissions are used in the LST analysis.

Since land use operational emissions – mainly from associated traffic – are dispersed over a wide area, localized impacts from project operation are substantially lower than during project construction. However, an Operational LST analysis was also performed. The land use category “Apartment Mid Rise” assumes that there are many residences commuting to and from the location daily.

The proposed Project site is 1.08 acres in source-receptor area Zone 7 – East San Fernando Valley. The 1-acre screening lookup tables were used to evaluate NO_x, CO, PM₁₀, and PM_{2.5} impacts on nearby receptors. The nearest receptor is approximately 26 meters (85 feet) away from the site. Therefore, the impact evaluation was performed using the closest distance within SCAQMD LST tables of 25 meters for construction and operations. (SCAQMD 2008a)

Results of Localized Significance Threshold Analysis

The LST results provided in Tables 5 and 6 show that on-site emissions from construction and operations would meet the LST passing criteria at the nearest receptors (25 meters). Thus, impacts would be less than significant.

PROJECTED IMPACT: Less Than Significant (LTS)

Table 5: Construction Localized Significance Threshold Evaluation				
Criteria Pollutants	Mitigated (lbs/day)	Threshold (lbs/day)	Percent of Threshold	Result
NO _x	19.4	80	24%	Pass
CO	28.9	498	6%	Pass
PM ₁₀	3.4	4	86%	Pass
PM _{2.5}	1.8	3	59%	Pass

Sources: SCAQMD 2019, CalEEMod version 2022

Notes:

Source-receptor area Zone 7 – East San Fernando Valley

1-acre area, 25 meters to receptor

Table 6: Operations Localized Significance Threshold Evaluation				
Criteria Pollutants	Mitigated (lbs/day)	Threshold (lbs/day)	Percent of Threshold	Result
NO _x	6.5	80	8%	Pass
CO	74.8	498	15%	Pass
PM ₁₀	0.33	1	33%	Pass
PM _{2.5}	0.12	1	12%	Pass

Sources: SCAQMD 2019, CalEEMod version 2022

Notes:

Source-receptor area Zone 7 – East San Fernando Valley

1-acre area, 25 meters to receptor

Operational PM₁₀/PM_{2.5} includes 1 mile around project site for mobile source fugitive dust plus engine exhaust

Greenhouse Gas Emissions from Construction and Operation

Greenhouse gases – primarily carbon dioxide (CO₂), methane (CH₄), and nitrous (N₂O) oxide, collectively reported as carbon dioxide equivalents (CO₂e) – are directly emitted from stationary source combustion of natural gas in equipment such as water heaters, boilers, process heaters, and furnaces. GHGs are also emitted from mobile sources such as on-road vehicles and off-road construction equipment burning fuels such as gasoline, diesel, biodiesel, propane, or natural gas (compressed or liquefied). Indirect GHG emissions result from electric power generated elsewhere (i.e., power plants) used to operate process equipment, lighting, and utilities at a facility. Also, included in GHG quantification is electric power used to pump the water supply (e.g., aqueducts, wells, pipelines) and disposal and decomposition of municipal waste in landfills. (CARB 2017)

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2019 standards improved upon the 2016 standards for new construction of, and additions and alterations to, residential, commercial, and industrial buildings. The 2019 standards went into effect on January 1, 2020 (CEC 2019).

Since the Title 24 standards require energy conservation features in new construction (e.g., high-efficiency lighting, high-efficiency heating, ventilating, and air-conditioning (HVAC) systems,

thermal insulation, double-glazed windows, water conserving plumbing fixtures, etc.), they indirectly regulate and reduce GHG emissions.

Using CalEEMod, direct onsite and offsite GHG emissions were estimated for construction and operation, and indirect offsite GHG emissions were estimated to account for electric power used by the proposed Project, water conveyance, and solid waste disposal.

Results of Greenhouse Gas Emissions Analyses

The SCAQMD officially adopted an industrial facility mass emissions threshold of 10,000 metric tons (MT) CO₂e per year (SCAQMD 2019) and has proposed a residential/commercial mass emissions threshold of 3,000 metric tons (MT) CO₂e per year. (SCAQMD 2008b)

Table 7 shows unmitigated and mitigated GHG emissions and evaluates mitigated emissions against SCAQMD significance thresholds. Operational efficiency measures incorporate typical code-required energy and water conservation features. Off-site traffic impacts are included in these emissions estimates, along with construction emissions amortized over 30 years.

PROJECTED IMPACT: Less Than Significant (LTS)

Table 7: Greenhouse Gas Emissions Summary and Significance Evaluation				
Greenhouse Gases	Unmitigated (MT/yr)	Mitigated (MT/yr)	Threshold (MT/yr)	Significance
CO ₂	2,462	2,451	—	—
CH ₄	0.79	0.79	—	—
N ₂ O	0.10	0.10	—	—
CO ₂ e	2,513	2,503	3,000	LTS

Sources: SCAQMD 2019, 2008b, CalEEMod version 2022

Notes:

Comprises annual operational emissions plus construction emissions amortized over 30 years

NOISE IMPACTS ANALYSES

Noise Analysis Methodology

The screening-level noise analysis for Project construction was completed based on methodology developed by the U.S. Department of Transportation Federal Highway Administration (DOT FHWA) at the John A. Volpe National Transportation Systems Center and other technical references consistent with CalEEMod outputs (equipment utilization). The DOT FHWA methodology uses actual noise measurement data collected during the Boston “Big Dig” project (1991-2006) as reference levels for a wide variety of construction equipment in common use, such as on the proposed Project. This noise analysis did not include field measurements of ambient noise in the vicinity of the Project site.

The FHWA noise model provides relatively conservative predictions because it does not account for site-specific geometry, dimensions of nearby structures, and local environmental conditions that can affect sound transmission, reflection, and attenuation. As a result, actual measured sound

levels at receptors may vary somewhat from predictions, typically lower. Additionally, the impacts of noise upon receptors (persons) are subjective because of differences in individual sensitivities and perceptions.

Noise impacts were evaluated against community noise standards contained in the City or County General Plan or other state or federal agency as applicable to the vicinity of the Project site. For this Project, the City of Los Angeles Municipal Code (LAMC), Chapter XI, Noise Regulation, Sections 112.02, 112.03, 112.05, and 41.40 contain the applicable evaluation criteria. Screening-level Project-generated noise is evaluated in relation to established thresholds of significance. Additionally, the same methods are used to determine noise impacts on the nearest sensitive receptor.

During construction activities, the Project would generate noise due to operation of minimal off-road equipment, portable equipment, and vehicles at or near the Project site. No significant increase in traffic is expected due to this relatively small project. No strong sources of vibrations are planned to be used during construction activities.

Since the Project is near an urban street, the incremental effect of Project operation (possible slightly increased traffic) would not be quantifiable against existing traffic noise (background) in the Project vicinity (i.e., less than significant impact). Also, since no airport is closer than 2 miles from the Project site, evaluation of aircraft noise upon the Project is not required.

Environmental Setting

Noise Descriptors

Noise is typically described as any unwanted or objectionable sound. Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity, the A-weighted decibel scale (dBA). Table 8 lists common sources of sound and their intensities in dBA.

Table 8: Typical Sound Level Characteristics		
Pressure (N/m ²)	Level (dB)	Sound Level Characteristic
2000	160	Rocket Launch
600	150	Military Jet Plane Takeoff
200	140	Threshold of Pain
60	130	Commercial Jet Plane Takeoff
20	120	Industrial Chipper or Punch Press
6	110	Loud Automobile Horn
2	100	Passing Diesel Truck – Curb Line
0.6	90	Factory - Heavy Manufacturing
0.2	80	Factory - Light Manufacturing
0.06	70	Open Floor Office - Cubicles
0.02	60	Conversational Speech
0.006	50	Private Office - Walled
0.002	40	Residence in Daytime
0.0006	30	Bedroom at Night
0.0002	20	Recording or Broadcasting Studio
0.00006	10	Threshold of Good Hearing - Adult
0.00002	0	Threshold of Excellent Hearing - Child

Sources: Broch 1971, Plog 1988

Notes:

Reference Level $P_0 = 0.00002 \text{ N/m}^2 = 0.0002 \text{ } \mu\text{bar}$

N/m^2 = Newtons per square meter (the Newton is the unit of force derived in the metric system); it is equal to the amount of net force required to accelerate one kilogram of mass at a rate of one meter per second squared ($1 \text{ kg} \cdot 1 \text{ m/s}^2$) in the direction of the applied force.

In most situations, a 3-dBA change in sound pressure is considered a “just-detectable” difference. A 5-dBA change (either louder or quieter) is readily noticeable, and 10-dBA change is a doubling (if louder) or halving (if quieter) of the subjective loudness. Sound from a small, localized source (a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (drops off) at a rate of 6 dBA for each doubling of the distance.

The duration of noise and the time period at which it occurs are important factors in determining the impact of noise on sensitive receptors. A single number called the equivalent continuous noise level (L_{eq}) may be used to describe sound that is changing in level. It is also used to describe the acoustic range of the noise source being measured, which is accomplished through the maximum L_{eq} (L_{max}) and minimum L_{eq} (L_{min}) indicators.

In determining the daily measure of community noise, it is important to account for the difference in human response to daytime and nighttime noise. Noise is more disturbing at night than during the day, and noise indices have been developed to account for the varying duration of noise events over time, as well as community response to them. The Community Noise Equivalent Level (CNEL) adds a 5-dB penalty to the “nighttime” hourly noise levels (HNLs) (i.e., 7:00 p.m. to 10:00

p.m.) and the Day-Night Average Level (L_{dn}) adds a 10-dB penalty to the evening HNLs (Caltrans 2020, FTA 2006).

Vibration Descriptors

Vibration is a unique form of noise because its energy is carried through structures and the earth, whereas noise is carried through the air. Thus, vibration is generally felt rather than heard. Typically, ground borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Actual human and structural response to different vibration levels is influenced by a combination of factors, including soil type, distance between the source and receptor, duration, and the number of perceived events.

While not a direct health hazard, the energy transmitted through the ground as vibration may result in structural damage, which may be costly to repair and dangerous in the event of structural failure. To assess the potential for structural damage associated with vibration, the vibratory ground motion in the vicinity of the affected structure is measured in terms of point peak velocity/peak particle velocity (PPV) in the vertical and horizontal directions (vector sum). A freight train passing at 100 feet may cause PPVs of 0.1 inch per second, while a strong earthquake may produce PPVs in the range of 10 inches per second. Minor cosmetic damage to buildings may begin in the range of 0.5 inch per second (Caltrans 2020, FTA 2006).

Existing Noise Environment

The Project site is in the City of Los Angeles, Los Angeles County, in a characteristically urban and densely populated area subject to noise from local traffic on public streets (Van Nuys Blvd. and Sherman Way), buses, trains, construction, and small power equipment (e.g., lawn mowers, edger, etc.). The FHWA noise model puts the expected daytime ambient noise from known sources at about 64 dBA at the nearest sensitive receptor to the proposed Project. This model is based on traffic from nearby roads, as well as a general 40 dBA urban background noise.

Sensitive Receptors

Some land uses are generally regarded as being more sensitive to noise than others due to the types of population groups or activities involved. Sensitive population groups include children and the elderly. The City of Los Angeles Noise Element also includes residential areas as noise-sensitive land uses. Other sensitive land uses generally include hospitals, schools, childcare facilities, senior facilities, libraries, churches, and parks.

The nearest school to the Project site is Valley Charter Middle School approximately 770 feet (235 meters) southeast of the site. Interceding building, and other multi-story buildings, would substantially shield the school from construction noise. The nearest residential receptors are west of the site, approximately 165 feet (50 meters) from the central construction zone; and a source-receptor distance of 25 meters (82 feet) was used. All construction activities would be short-term and temporary. All construction work is planned to be conducted during daylight hours; no nighttime work is planned to be performed. Upon completion of construction, construction generated noise would permanently cease. Since the proposed project is located in a dense urban area and not within 500 feet of a major freeway, no significant additional long-term traffic is expected, and therefore no additional Project-related noise is expected over the long term.

Regulatory Setting

California

The State of California does not promulgate statewide standards for environmental noise but requires each city and county to include a noise element in its general plan [California Government Code Section 65302(f)]. In addition, Title 4 of the CCR has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. In general, the guidelines require that community noise standards:

- Protect residents from the harmful and annoying effects of exposure to excessive noise;
- Prevent incompatible land uses from encroaching upon existing or programmed land uses likely to create significant noise impacts; and
- Encourage the application of state-of-the-art land use planning methodologies in the area of managing and minimizing potential noise conflicts.

Construction vibration is regulated at the state level in accordance with standards established by the *Transportation and Construction-Induced Vibration Guidance Manual* issued by Caltrans in 2004. Continuous sources include the use of vibratory compaction equipment and other construction equipment that creates vibration other than in single events. Transient sources create a single isolated vibration event, such as blasting. Thresholds for continuous sources are 0.5 and 0.1 inch per second PPV for structural damage and annoyance, respectively. Thresholds for transient sources are 1.0 and 0.9 PPV for structural damage and annoyance, respectively (Caltrans 2020).

City of Los Angeles Municipal Code – Chapter XI, Noise Regulation

For this Project, the City of Los Angeles Municipal Code (LAMC), Chapter XI, Noise Regulation, Sections 112.02, 112.03, 112.05, and 41.40 contain the applicable evaluation criteria.

Operational on-site stationary sources of mechanical noise are required to comply with the LAMC Section 112.02, which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise level on the premises of other occupied properties, e.g., nearby residential buildings, by more than 5 dBA. Modern roof-mounted mechanical equipment is designed to meet this standard.

LAMC Section 112.03 references Section 41.40 which regulates noise from construction activities. Outdoor construction activities that generate noise are prohibited between the nighttime hours of 9:00 pm and 7:00 am Monday through Friday, and between 6:00 pm and 8:00 am on Saturdays and national holidays. Construction activities are prohibited on Sundays. The construction activities associated with the proposed Project would comply with these LAMC requirements.

Per Section 112.05, construction noise impacts would be significant if noise from powered equipment or powered hand tools used for construction within 500 feet (150 meters) of a residential zone exceeds 75 A-weighted decibels (dBA) at a distance of 50 feet (15 meters) from the noise source between the hours of 7:00 am and 10:00 pm. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means that the 75 dBA limitation cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of the equipment. However, the

burden of proof of technical infeasibility is placed upon the person or persons generating the noise, i.e., the contractor and owner or owner's agent.

Results of Screening Noise Analysis

The proposed Project can be characterized as development of a new multi-residential building with below ground parking. Most noise would occur during the demolition, grading, site preparation, building construction, and paving when heavy equipment would be operating.

During each of the six construction phases there would be a different mix of equipment operating and cumulative noise levels would vary based on the amount of equipment in operation and the location of each activity at the Project site. In general, use of off-road equipment and portable equipment would generate noise due to engine mechanicals, engine exhaust, driveline mechanicals, shaft-driven devices and accessories, hydraulics operation, ground friction and displacement, and gravity drops (dumping, unloading).

Since no intense percussive actions (e.g., hard rock-breaking, large pile-driving) are planned to occur during the site work, no strong groundborne vibrations are expected to be generated that could affect nearby structures or be noticeable to their occupants.

Types of equipment (FHWA 2006) to be used during the Project and noise-emitting characteristics (i.e., usage factors, reference dBA, and percussive source) are shown in Table 9 consistent with CalEEMod outputs (Attachment 1).

The Project is expected to require up to approximately 13 months of planned work activities (i.e., from mobilization to substantial completion) comprising six construction phases:

- 1) Demolition
- 2) Site preparation
- 3) Grading
- 4) Building construction
- 5) Paving
- 6) Architectural coating

Deviations from this schedule would not affect the noise analysis because noise does not persist or accumulate in the environment.

Table 9: FHWA Noise Reference Levels and Usage Factors

CalEEMod Construction Detail			FHWA Equipment Type	Ref.	Usage Factor	Ref. Level	Percussive Source
Phase Name	Equipment Description	Qty.			percent	dBA	Yes/No
Demolition (1)	Tractors/Loaders/Backhoes	3	Backhoe (with loader)	1	40%	80	No
	Rubber Tired Dozers	1	Dozer (crawler tractor)	1	40%	85	No
	Concrete/Industrial Saws	1	Concrete Saw	1	20%	90	No
Site Preparation (2)	Graders	1	Grader	1	40%	85	No
	Rubber Tired Dozers	1	Dozer (crawler tractor)	1	40%	85	No
	Tractors/Loaders/Backhoes	1	Backhoe (with loader)	1	40%	80	No
Grading (3)	Graders	1	Grader	1	40%	85	No
	Tractors/Loaders/Backhoes	2	Backhoe (with loader)	1	40%	80	No
	Rubber Tired Dozers	1	Dozer (crawler tractor)	1	40%	85	No
Building Construction (4)	Cranes	1	Crane	1	16%	85	No
	Forklifts	1	Forklift	1	40%	80	No
	Generator Sets	1	Generator (general purpose utility)	1	50%	82	No
	Tractors/Loaders/Backhoes	1	Backhoe (with loader)	1	40%	80	No
	Welders	3	Welding Machine (arc welding)	1	50%	70	No
Paving (5)	Tractors/Loaders/Backhoes	1	Backhoe (with loader)	1	40%	80	No
	Pavers	1	Paver (asphalt)	1	50%	85	No
	Paving Equipment	1	Paver (asphalt)	1	50%	85	No
	Rollers	1	Roller	1	20%	85	No
	Cement and Mortar Mixers	1	Drum Mixer	1	50%	80	No
Architectural Coating (6)	Air compressor	1	Compressor (air)	1	40%	80	No

Source: CalEEMod v 2022, FHWA 2006

Table 10 shows a comparison of: screening-level estimated daytime exterior noise impacts for peak construction activities at designated receptors, and the CEQA thresholds outlined in LAMC Chapter XI, using FHWA attenuation algorithms. If the threshold is not exceeded, then this project should be considered acceptable.

Table 10: Estimated Peak Activity Daytime Noise Impacts – Residential Receptors (mitigated)^{c, d}				
Construction Phases	Normal Acceptance Criteria – LAMC 112.05			
	Modeled Noise Level (L_{eq} dBA)^a	CalEEMod Duration (days)	Significance Threshold (CNEL dBA)^b	Exceeds Threshold (Yes/No)?
Background	64	-	-	No
Demolition	72	20	75	No
Site Preparation	70	2	75	No
Grading	72	4	75	No
Building Construction	69	200	75	No
Paving	72	10	75	No
Architectural Coating	68	40	75	No
Long-Term Impact	64	-	-	No

Sources: CalEEMod v2022, FHWA 2006, Broch 1971, Plog 1988, LAMC 112.05

Notes:

^a Includes existing street traffic and ambient noise sources (cumulative impacts)

^b LAMC 112.05

Discussion

Construction Noise – LAMC Sections 112.03 and 112.05

Construction noise impacts would be significant if, as defined by Los Angeles Municipal Code (LAMC) Section 112.05, noise from powered equipment or powered hand tools used for construction within 500 feet (150 meters) of a residential zone exceeds 75 A-weighted decibels (dBA) at a distance of 50 feet (15 meters) from the noise source between the hours of 7:00 am and 10:00 pm. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means that the 75 dBA limitation cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of the equipment. However, the burden of proof of technical infeasibility is placed upon the person or persons generating the noise, i.e., the contractor and owner or owner's agent.

LAMC Section 112.03 references Section 41.40 which regulates noise from construction activities. Outdoor construction activities that generate noise are prohibited between the nighttime hours of 9:00 pm and 7:00 am Monday through Friday, and between 6:00 pm and 8:00 am on Saturdays and national holidays. Construction activities are prohibited on Sundays. The construction activities associated with the proposed Project would comply with these LAMC requirements.

Although the estimated construction-related exterior noise levels associated with the proposed Project are modeled to normally be below the 75 dBA threshold, there may be times when the construction activities could intermittently and marginally exceed the 75 dBA threshold at 50 feet from the noise source. To minimize impacts, the Project will implement technically feasible control measures in compliance with the standards set forth in LAMC Section 112.05. Specifically, the use of deflectors/barriers such as plywood construction fencing (½-inch thickness), flexible sound-absorbing curtains, or existing intervening buildings, can reduce line-of-sight exterior noise levels by approximately 5 to 15 dBA, depending on the applied physical configuration (FHWA 2006). The estimated noise impacts shown in Table 10 incorporate these control measures.

With the application of construction noise control measures exterior noise levels would be reduced by approximately 5 dBA, possibly up to 15 dBA. Therefore, based on the provisions set forth in LAMC 112.05, implementation of the LAMC-required noise control measures described below would enable the proposed Project to comply with the LAMC, and construction noise impacts would be less than significant.

The construction noise control measures required by LAMC 112.05 would include the following:

- 1) The Project shall comply with the City of Los Angeles Noise Ordinance No. 161,574 (see LAMC Section 112.05), and any subsequent ordinances (et seq), which prohibit the emission or creation of noise beyond certain levels.
- 2) Construction shall be restricted to the hours of 7:00 am to 9:00 pm Monday through Friday, and 8:00 am to 6:00 pm on Saturdays or national holidays. No construction work shall be performed at any time on Sundays.
- 3) Construction activities shall be scheduled to avoid operating several pieces of large equipment simultaneously, which can cumulatively cause higher noise levels.
- 4) Noise-generating equipment operated at the Project site shall be equipped with the most effective and technologically feasible noise control devices, such as mufflers, lagging (enclosures for exhaust pipes), and/or motor enclosures. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.
- 5) Noise-generating equipment, where its location on the site may be flexible (e.g., air compressors, generators, cement and mortar mixers, and materials deliveries), shall be placed as far as practical from the nearest noise sensitive land uses. Natural and/or manmade barriers (e.g., trees, fencing, curtains) shall be used to screen propagation of noise from such activities toward these land uses to the maximum extent possible.
- 6) For outside work BMPs, the Project shall implement noise barriers comprising plywood construction fencing and/or flexible sound-absorbing curtains as practicable. The noise barriers shall be erected around the perimeter of the construction site to minimize the transmission of construction noise toward nearby noise-sensitive land uses. The noise barriers shall be at least 8 feet in height and constructed of materials achieving an Insertion Loss (IL) coefficient of at least 5 dBA for flexible curtains, 8 dBA for rigid plywood fencing, or 10 dBA in combination (FHWA 2006).
- 7) The Project shall comply with the City of Los Angeles Building Regulations Ordinance No. 178,048 (see LAMC Section 91.106.4.8), which requires a construction site notice to be provided that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and City telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public, i.e., in plain sight.

Operational Noise – LAMC Section 112.02

Upon completion of construction and occupancy of the proposed Project, on-site operational noise would be generated mainly by heating, ventilation, and air conditioning (HVAC) equipment installed on the roof of the new building. However, the overall noise levels generated by the new HVAC equipment are not expected to be substantially greater than generated by older HVAC equipment installed on existing buildings near the Project site. As such, the new HVAC equipment associated with the proposed Project would not represent a substantially new type or source of noise in the general vicinity. In addition, the operation of this and any other on-site stationary sources of mechanical noise would be required to comply with the LAMC Section 112.02, which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise level on the premises of other occupied properties, e.g., nearby residential buildings, by more than 5 dBA. Such equipment is designed to meet this standard.

No adverse impacts are expected from, and no noise control measures would be required for, the operation of the proposed project. Therefore, the operational noise impacts of the proposed Project would be less than significant.

Interior areas of the completed Project would not be adversely impacted by ambient (outdoor) urban noise because the Project would be constructed to meet applicable California Code of Regulations (CCR) Title 24 Parts 6 and 11 building energy efficiency standards (CEC 2019). Thermal insulation, e.g., fiberglass batting in exterior walls and double-pane windows, also attenuates sound transmission and thus would provide an acceptable interior noise environment, which is particularly important for sensitive land uses. Specifically, the proposed Project would be designed and constructed to maintain interior noise levels at or below a Community Noise Equivalent Level (CNEL) of 45 dBA in any normally occupied space of the Project with no other sources of interior noise operating, such as HVAC, appliances, power tools, or office equipment. As such, interior noise impacts of the proposed Project would be less than significant.

This study predicts a less than significant impact in accordance with the LAMC. As described above, temporary noise barriers may need to be installed as a control measure during the early stages of construction where demolition activities are conducted.

Analysis of Noise Significance Criteria

This study predicts a less than significant impact in accordance with applicable noise ordinances and General Plans, including the City of Los Angeles Municipal Code. Would the project result in:

- a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

No. As shown in the above analysis, temporary construction noise would be limited to daylight hours and would permanently cease upon completion of construction. Aggregated average construction noise is not expected to exceed 75 dBA at nearby receptors, which is below the significant threshold set by the City. Therefore, temporary impacts on ambient noise levels during construction would be less than significant. Operational noise sources for the Project, such as new HVAC equipment, are of quiet design per commercial

standards. The noise from truck loading and trash collection and compaction activities are expected to have less than significant impacts on long-term ambient noise levels.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Although construction of the proposed Project would involve excavation within the Project area, construction plans do not include intense percussive actions (e.g., hard rock-breaking, large pile-driving). Therefore, no strong ground-borne vibrations are expected to be generated that could affect nearby structures or be noticeable to their occupants and impacts would be less than significant.

PROJECTED IMPACT: Less Than Significant (LTS)

VNB, LLC
7115-7131 Van Nuys Boulevard, Los Angeles, CA 91405
July 27, 2022
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CLOSING

Thank you very much for the opportunity to be of assistance. Should you have any questions, please contact me at (415) 248-8490 (mobile).

Sincerely,



Mabelle Wongsanguan, BSChemE | Berkeley Office
Engineer
Yorke Engineering, LLC
MWongsanguan@YorkeEngr.com

cc: Bradford Boyes, Yorke Engineering, LLC
Tina Darjazanie, Yorke Engineering, LLC

Enclosures/Attachments:

1. CalEEMod Outputs

AIR QUALITY AND GHG REFERENCES

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ATTACHMENT 1 – CALEEMOD OUTPUTS

VNB_base Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	VNB_base
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	18.6
Location	7115 Van Nuys Blvd, Van Nuys, CA 91405, USA
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3845
EDFZ	17
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	214	Dwelling Unit	1.08	178,258	0.00	—	633	Five levels of apartment residential space
Enclosed Parking with Elevator	70.6	1000sqft	0.00	70,560	0.00	—	633	Two-story basement garage

Unenclosed Parking with Elevator	19.5	1000sqft	0.00	19,470	11,940	—	—	Ground level parking spaces
Strip Mall	15.8	1000sqft	0.00	15,800	0.00	—	633	Ground level retail spaces

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-12	Sweep Paved Roads
Construction	C-13	Use Low-VOC Paints for Construction
Energy	E-1	Buildings Exceed 2019 Title 24 Building Envelope Energy Efficiency Standards
Water	W-4	Require Low-Flow Water Fixtures
Area	AS-1	Use Low-VOC Cleaning Supplies
Area	AS-2	Use Low-VOC Paints

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	52.6	19.4	28.9	0.03	0.93	7.21	8.15	0.86	3.46	4.32	—	6,037	6,037	0.26	0.30	16.7	6,150
Mit.	40.3	19.4	28.9	0.03	0.93	2.93	3.42	0.86	0.92	1.78	—	6,037	6,037	0.26	0.30	16.7	6,150
% Reduced	23%	—	—	—	—	59%	58%	—	73%	59%	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.38	14.0	26.4	0.03	0.49	2.93	3.42	0.46	0.70	1.15	—	5,884	5,884	0.26	0.30	0.43	5,981
Mit.	2.38	14.0	26.4	0.03	0.49	2.93	3.42	0.46	0.70	1.15	—	5,884	5,884	0.26	0.30	0.43	5,981
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.15	4.71	7.71	0.01	0.18	0.89	1.03	0.16	0.23	0.39	—	1,616	1,616	0.07	0.08	1.76	1,642
Mit.	4.81	4.71	7.71	0.01	0.18	0.89	1.03	0.16	0.22	0.35	—	1,616	1,616	0.07	0.08	1.76	1,642
% Reduced	22%	—	—	—	—	—	—	—	2%	10%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.12	0.86	1.41	< 0.005	0.03	0.16	0.19	0.03	0.04	0.07	—	267	267	0.01	0.01	0.29	272
Mit.	0.88	0.86	1.41	< 0.005	0.03	0.16	0.19	0.03	0.04	0.06	—	267	267	0.01	0.01	0.29	272
% Reduced	22%	—	—	—	—	—	—	—	2%	10%	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2022	2.40	19.4	28.9	0.03	0.93	7.21	8.15	0.86	3.46	4.32	—	6,037	6,037	0.26	0.30	16.7	6,150
2023	52.6	9.81	10.2	0.02	0.41	2.69	3.10	0.38	0.67	1.05	—	1,801	1,801	0.07	0.01	—	1,807
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2022	2.38	14.0	26.4	0.03	0.49	2.93	3.42	0.46	0.70	1.15	—	5,884	5,884	0.26	0.30	0.43	5,981
2023	1.19	9.81	10.2	0.02	0.41	2.69	3.10	0.38	0.67	1.05	—	1,801	1,801	0.07	0.01	—	1,807
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2022	0.70	4.71	7.71	0.01	0.18	0.85	1.02	0.16	0.23	0.39	—	1,616	1,616	0.07	0.08	1.76	1,642
2023	6.15	3.31	3.49	0.01	0.14	0.89	1.03	0.13	0.22	0.35	—	606	606	0.02	< 0.005	—	608
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2022	0.13	0.86	1.41	< 0.005	0.03	0.15	0.19	0.03	0.04	0.07	—	267	267	0.01	0.01	0.29	272
2023	1.12	0.60	0.64	< 0.005	0.03	0.16	0.19	0.02	0.04	0.06	—	100	100	< 0.005	< 0.005	—	101

2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2022	2.40	19.4	28.9	0.03	0.93	2.93	3.42	0.86	0.92	1.78	—	6,037	6,037	0.26	0.30	16.7	6,150
2023	40.3	9.81	10.2	0.02	0.41	2.69	3.10	0.38	0.67	1.05	—	1,801	1,801	0.07	0.01	—	1,807

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2022	2.38	14.0	26.4	0.03	0.49	2.93	3.42	0.46	0.70	1.15	—	5,884	5,884	0.26	0.30	0.43	5,981
2023	1.19	9.81	10.2	0.02	0.41	2.69	3.10	0.38	0.67	1.05	—	1,801	1,801	0.07	0.01	—	1,807
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2022	0.70	4.71	7.71	0.01	0.18	0.76	0.94	0.16	0.19	0.35	—	1,616	1,616	0.07	0.08	1.76	1,642
2023	4.81	3.31	3.49	0.01	0.14	0.89	1.03	0.13	0.22	0.35	—	606	606	0.02	< 0.005	—	608
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2022	0.13	0.86	1.41	< 0.005	0.03	0.14	0.17	0.03	0.03	0.06	—	267	267	0.01	0.01	0.29	272
2023	0.88	0.60	0.64	< 0.005	0.03	0.16	0.19	0.02	0.04	0.06	—	100	100	< 0.005	< 0.005	—	101

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.6	6.21	74.9	0.13	0.16	4.05	4.21	0.15	0.72	0.87	57.3	15,883	15,940	4.77	0.58	52.8	16,284
Mit.	13.1	6.19	74.8	0.13	0.15	4.05	4.20	0.15	0.72	0.87	55.0	15,822	15,877	4.76	0.57	52.8	16,220
% Reduced	3%	< 0.5%	< 0.5%	—	1%	—	< 0.5%	1%	—	< 0.5%	4%	< 0.5%	< 0.5%	< 0.5%	1%	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.6	6.57	53.8	0.12	0.14	4.05	4.20	0.14	0.72	0.86	57.3	15,310	15,367	4.80	0.61	2.71	15,671
Mit.	11.1	6.54	53.8	0.12	0.14	4.05	4.19	0.14	0.72	0.86	55.0	15,250	15,305	4.79	0.60	2.71	15,607
% Reduced	4%	< 0.5%	< 0.5%	—	1%	—	< 0.5%	1%	—	< 0.5%	4%	< 0.5%	< 0.5%	< 0.5%	1%	—	< 0.5%

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.4	6.37	63.2	0.11	0.15	3.80	3.94	0.14	0.68	0.82	57.3	14,739	14,796	4.76	0.57	22.2	15,109
Mit.	12.0	6.34	63.2	0.11	0.15	3.80	3.94	0.14	0.68	0.82	55.0	14,679	14,734	4.74	0.57	22.2	15,044
% Reduced	4%	< 0.5%	< 0.5%	—	1%	—	< 0.5%	1%	—	< 0.5%	4%	< 0.5%	< 0.5%	< 0.5%	1%	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.26	1.16	11.5	0.02	0.03	0.69	0.72	0.03	0.12	0.15	9.49	2,440	2,450	0.79	0.10	3.67	2,501
Mit.	2.18	1.16	11.5	0.02	0.03	0.69	0.72	0.03	0.12	0.15	9.11	2,430	2,439	0.79	0.09	3.67	2,491
% Reduced	4%	< 0.5%	< 0.5%	< 0.5%	1%	—	< 0.5%	1%	—	< 0.5%	4%	< 0.5%	< 0.5%	< 0.5%	1%	—	< 0.5%
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No
Mit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.93	5.28	57.9	0.12	0.08	4.05	4.13	0.08	0.72	0.80	—	12,238	12,238	0.66	0.51	51.4	12,457
Area	6.62	0.16	16.7	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6
Energy	0.04	0.77	0.33	< 0.005	0.06	—	0.06	0.06	—	0.06	—	3,473	3,473	0.26	0.03	—	3,488
Water	—	—	—	—	—	—	—	—	—	—	19.5	119	139	0.08	0.04	—	154
Waste	—	—	—	—	—	—	—	—	—	—	37.8	0.00	37.8	3.77	0.00	—	132
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.38	1.38
Total	13.6	6.21	74.9	0.13	0.16	4.05	4.21	0.15	0.72	0.87	57.3	15,883	15,940	4.77	0.58	52.8	16,284
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.81	5.80	53.5	0.11	0.08	4.05	4.13	0.08	0.72	0.80	—	11,717	11,717	0.69	0.54	1.33	11,896
Area	4.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.77	0.33	< 0.005	0.06	—	0.06	0.06	—	0.06	—	3,473	3,473	0.26	0.03	—	3,488
Water	—	—	—	—	—	—	—	—	—	—	19.5	119	139	0.08	0.04	—	154
Waste	—	—	—	—	—	—	—	—	—	—	37.8	0.00	37.8	3.77	0.00	—	132
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.38	1.38
Total	11.6	6.57	53.8	0.12	0.14	4.05	4.20	0.14	0.72	0.86	57.3	15,310	15,367	4.80	0.61	2.71	15,671
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.34	5.49	51.4	0.11	0.08	3.80	3.87	0.07	0.68	0.75	—	11,111	11,111	0.64	0.50	20.8	11,298
Area	6.02	0.11	11.4	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.2	35.2	< 0.005	< 0.005	—	35.3
Energy	0.04	0.77	0.33	< 0.005	0.06	—	0.06	0.06	—	0.06	—	3,473	3,473	0.26	0.03	—	3,488
Water	—	—	—	—	—	—	—	—	—	—	19.5	119	139	0.08	0.04	—	154

Waste	—	—	—	—	—	—	—	—	—	—	37.8	0.00	37.8	3.77	0.00	—	132
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.38	1.38
Total	12.4	6.37	63.2	0.11	0.15	3.80	3.94	0.14	0.68	0.82	57.3	14,739	14,796	4.76	0.57	22.2	15,109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.16	1.00	9.38	0.02	0.01	0.69	0.71	0.01	0.12	0.14	—	1,840	1,840	0.11	0.08	3.45	1,871
Area	1.10	0.02	2.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.83	5.83	< 0.005	< 0.005	—	5.85
Energy	0.01	0.14	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	575	575	0.04	< 0.005	—	577
Water	—	—	—	—	—	—	—	—	—	—	3.24	19.8	23.0	0.01	0.01	—	25.5
Waste	—	—	—	—	—	—	—	—	—	—	6.25	0.00	6.25	0.62	0.00	—	21.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Total	2.26	1.16	11.5	0.02	0.03	0.69	0.72	0.03	0.12	0.15	9.49	2,440	2,450	0.79	0.10	3.67	2,501

2.6. Operations Emissions by Sector, Mitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.93	5.28	57.9	0.12	0.08	4.05	4.13	0.08	0.72	0.80	—	12,238	12,238	0.66	0.51	51.4	12,457
Area	6.17	0.16	16.7	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6
Energy	0.04	0.74	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	3,427	3,427	0.26	0.03	—	3,442
Water	—	—	—	—	—	—	—	—	—	—	17.2	106	123	0.07	0.04	—	136
Waste	—	—	—	—	—	—	—	—	—	—	37.8	0.00	37.8	3.77	0.00	—	132
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.38	1.38
Total	13.1	6.19	74.8	0.13	0.15	4.05	4.20	0.15	0.72	0.87	55.0	15,822	15,877	4.76	0.57	52.8	16,220
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.81	5.80	53.5	0.11	0.08	4.05	4.13	0.08	0.72	0.80	—	11,717	11,717	0.69	0.54	1.33	11,896

Area	4.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.74	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	3,427	3,427	0.26	0.03	—	3,442
Water	—	—	—	—	—	—	—	—	—	—	17.2	106	123	0.07	0.04	—	136
Waste	—	—	—	—	—	—	—	—	—	—	37.8	0.00	37.8	3.77	0.00	—	132
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.38	1.38
Total	11.1	6.54	53.8	0.12	0.14	4.05	4.19	0.14	0.72	0.86	55.0	15,250	15,305	4.79	0.60	2.71	15,607
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.34	5.49	51.4	0.11	0.08	3.80	3.87	0.07	0.68	0.75	—	11,111	11,111	0.64	0.50	20.8	11,298
Area	5.58	0.11	11.4	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.2	35.2	< 0.005	< 0.005	—	35.3
Energy	0.04	0.74	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	3,427	3,427	0.26	0.03	—	3,442
Water	—	—	—	—	—	—	—	—	—	—	17.2	106	123	0.07	0.04	—	136
Waste	—	—	—	—	—	—	—	—	—	—	37.8	0.00	37.8	3.77	0.00	—	132
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.38	1.38
Total	12.0	6.34	63.2	0.11	0.15	3.80	3.94	0.14	0.68	0.82	55.0	14,679	14,734	4.74	0.57	22.2	15,044
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.16	1.00	9.38	0.02	0.01	0.69	0.71	0.01	0.12	0.14	—	1,840	1,840	0.11	0.08	3.45	1,871
Area	1.02	0.02	2.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.83	5.83	< 0.005	< 0.005	—	5.85
Energy	0.01	0.14	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	567	567	0.04	< 0.005	—	570
Water	—	—	—	—	—	—	—	—	—	—	2.86	17.5	20.3	0.01	0.01	—	22.5
Waste	—	—	—	—	—	—	—	—	—	—	6.25	0.00	6.25	0.62	0.00	—	21.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Total	2.18	1.16	11.5	0.02	0.03	0.69	0.72	0.03	0.12	0.15	9.11	2,430	2,439	0.79	0.09	3.67	2,491

3. Construction Emissions Details

3.1. Demolition (2022) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.86	18.5	17.3	0.02	0.85	—	0.85	0.78	—	0.78	—	2,492	2,492	0.10	0.02	—	2,500
Demolition	—	—	—	—	—	0.56	0.56	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	1.01	0.95	< 0.005	0.05	—	0.05	0.04	—	0.04	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.07	0.08	1.11	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	184	184	0.01	0.01	0.84	187
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.78	0.25	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	473	473	0.03	0.08	1.06	497
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	9.71	9.71	< 0.005	< 0.005	0.02	9.84
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	25.9	25.9	< 0.005	< 0.005	0.02	27.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	1.61	1.61	< 0.005	< 0.005	< 0.005	1.63
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.29	4.29	< 0.005	< 0.005	< 0.005	4.51

3.2. Demolition (2022) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.86	18.5	17.3	0.02	0.85	—	0.85	0.78	—	0.78	—	2,492	2,492	0.10	0.02	—	2,500
Demolition	—	—	—	—	—	0.56	0.56	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	1.01	0.95	< 0.005	0.05	—	0.05	0.04	—	0.04	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.11	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	184	184	0.01	0.01	0.84	187
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.78	0.25	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	473	473	0.03	0.08	1.06	497
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	9.71	9.71	< 0.005	< 0.005	0.02	9.84
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	25.9	25.9	< 0.005	< 0.005	0.02	27.2

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	1.61	1.61	< 0.005	< 0.005	< 0.005	1.63
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.29	4.29	< 0.005	< 0.005	< 0.005	4.51

3.3. Site Preparation (2022) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.67	16.8	14.1	0.02	0.81	—	0.81	0.74	—	0.74	—	2,062	2,062	0.08	0.02	—	2,069
Dust From Material Movement	—	—	—	—	—	6.26	6.26	—	3.00	3.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.02	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.87	1.87	< 0.005	< 0.005	—	1.88
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.67	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	111	111	< 0.005	< 0.005	0.50	112
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2022) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.67	16.8	14.1	0.02	0.81	—	0.81	0.74	—	0.74	—	2,062	2,062	0.08	0.02	—	2,069
Dust From Material Movement	—	—	—	—	—	1.63	1.63	—	0.78	0.78	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.87	1.87	< 0.005	< 0.005	—	1.88
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.67	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	111	111	< 0.005	< 0.005	0.50	112
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2022) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.92	19.4	16.7	0.02	0.93	—	0.93	0.86	—	0.86	—	2,452	2,452	0.10	0.02	—	2,460

Dust From Material Movement	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.21	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.9	26.9	< 0.005	< 0.005	—	27.0
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.45	4.45	< 0.005	< 0.005	—	4.46
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.89	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	147	147	0.01	< 0.005	0.67	150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2022) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.92	19.4	16.7	0.02	0.93	—	0.93	0.86	—	0.86	—	2,452	2,452	0.10	0.02	—	2,460
Dust From Material Movement	—	—	—	—	—	1.84	1.84	—	0.89	0.89	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.21	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.9	26.9	< 0.005	< 0.005	—	27.0
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.45	4.45	< 0.005	< 0.005	—	4.46
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.89	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	147	147	0.01	< 0.005	0.67	150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2022) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	10.6	10.5	0.02	0.48	—	0.48	0.44	—	0.44	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	10.6	10.5	0.02	0.48	—	0.48	0.44	—	0.44	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	2.52	2.49	< 0.005	0.11	—	0.11	0.10	—	0.10	—	426	426	0.02	< 0.005	—	428
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.06	0.46	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	70.6	70.6	< 0.005	< 0.005	—	70.8
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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.04	1.20	17.5	0.00	0.00	0.16	0.16	0.00	0.00	0.00	—	2,903	2,903	0.12	0.10	13.2	2,948
Vendor	0.06	2.03	0.90	0.01	0.02	0.08	0.10	0.02	0.03	0.05	—	1,334	1,334	0.06	0.19	3.53	1,395
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.03	1.30	15.0	0.00	0.00	0.16	0.16	0.00	0.00	0.00	—	2,750	2,750	0.13	0.10	0.34	2,782
Vendor	0.06	2.11	0.91	0.01	0.02	0.08	0.10	0.02	0.03	0.05	—	1,334	1,334	0.06	0.19	0.09	1,392
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.33	3.71	0.00	0.00	0.04	0.04	0.00	0.00	0.00	—	661	661	0.03	0.02	1.35	670
Vendor	0.01	0.51	0.21	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	316	316	0.01	0.04	0.36	330
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.06	0.68	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	109	109	< 0.005	< 0.005	0.22	111
Vendor	< 0.005	0.09	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	52.3	52.3	< 0.005	0.01	0.06	54.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2022) - Mitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	10.6	10.5	0.02	0.48	—	0.48	0.44	—	0.44	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	10.6	10.5	0.02	0.48	—	0.48	0.44	—	0.44	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	2.52	2.49	< 0.005	0.11	—	0.11	0.10	—	0.10	—	426	426	0.02	< 0.005	—	428
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.46	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	70.6	70.6	< 0.005	< 0.005	—	70.8
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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.04	1.20	17.5	0.00	0.00	0.16	0.16	0.00	0.00	0.00	—	2,903	2,903	0.12	0.10	13.2	2,948
Vendor	0.06	2.03	0.90	0.01	0.02	0.08	0.10	0.02	0.03	0.05	—	1,334	1,334	0.06	0.19	3.53	1,395
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.03	1.30	15.0	0.00	0.00	0.16	0.16	0.00	0.00	0.00	—	2,750	2,750	0.13	0.10	0.34	2,782
Vendor	0.06	2.11	0.91	0.01	0.02	0.08	0.10	0.02	0.03	0.05	—	1,334	1,334	0.06	0.19	0.09	1,392
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.33	3.71	0.00	0.00	0.04	0.04	0.00	0.00	0.00	—	661	661	0.03	0.02	1.35	670
Vendor	0.01	0.51	0.21	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	316	316	0.01	0.04	0.36	330
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.06	0.68	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	109	109	< 0.005	< 0.005	0.22	111
Vendor	< 0.005	0.09	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	52.3	52.3	< 0.005	0.01	0.06	54.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2023) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.19	9.81	10.2	0.02	0.41	—	0.41	0.38	—	0.38	—	1,801	1,801	0.07	0.01	—	1,807
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.19	9.81	10.2	0.02	0.41	—	0.41	0.38	—	0.38	—	1,801	1,801	0.07	0.01	—	1,807

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	3.07	3.19	0.01	0.13	—	0.13	0.12	—	0.12	—	564	564	0.02	< 0.005	—	566
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.56	0.58	< 0.005	0.02	—	0.02	0.02	—	0.02	—	93.4	93.4	< 0.005	< 0.005	—	93.7
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.10. Building Construction (2023) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.19	9.81	10.2	0.02	0.41	—	0.41	0.38	—	0.38	—	1,801	1,801	0.07	0.01	—	1,807
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.19	9.81	10.2	0.02	0.41	—	0.41	0.38	—	0.38	—	1,801	1,801	0.07	0.01	—	1,807

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	3.07	3.19	0.01	0.13	—	0.13	0.12	—	0.12	—	564	564	0.02	< 0.005	—	566
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.56	0.58	< 0.005	0.02	—	0.02	0.02	—	0.02	—	93.4	93.4	< 0.005	< 0.005	—	93.7
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.11. Paving (2023) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	5.09	6.53	0.01	0.25	—	0.25	0.23	—	0.23	—	992	992	0.04	0.01	—	995
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.14	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.2	27.2	< 0.005	< 0.005	—	27.3
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.50	4.50	< 0.005	< 0.005	—	4.51
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.12. Paving (2023) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	5.09	6.53	0.01	0.25	—	0.25	0.23	—	0.23	—	992	992	0.04	0.01	—	995
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.14	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.2	27.2	< 0.005	< 0.005	—	27.3
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.50	4.50	< 0.005	< 0.005	—	4.51
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.13. Architectural Coating (2023) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.93	1.15	< 0.005	0.04	—	0.04	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134

Architectu Coatings	52.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.6	14.6	< 0.005	< 0.005	—	14.7
Architectu ral Coatings	5.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.42	2.42	< 0.005	< 0.005	—	2.43
Architectu ral Coatings	1.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.14. Architectural Coating (2023) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.93	1.15	< 0.005	0.04	—	0.04	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	40.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.6	14.6	< 0.005	< 0.005	—	14.7
Architectural Coatings	4.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.42	2.42	< 0.005	< 0.005	—	2.43
Architectural Coatings	0.80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	4.32	3.25	35.5	0.07	0.05	0.41	0.46	0.05	0.13	0.18	—	7,478	7,478	0.41	0.31	31.4	7,612
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	2.61	2.03	22.3	0.05	0.03	0.26	0.30	0.03	0.08	0.11	—	4,761	4,761	0.25	0.20	20.0	4,845
Total	6.93	5.28	57.9	0.12	0.08	0.68	0.76	0.08	0.21	0.29	—	12,238	12,238	0.66	0.51	51.4	12,457
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	4.25	3.57	32.9	0.07	0.05	0.41	0.46	0.05	0.13	0.18	—	7,160	7,160	0.43	0.33	0.81	7,269
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Unenclos Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	2.56	2.23	20.6	0.04	0.03	0.26	0.30	0.03	0.08	0.11	—	4,558	4,558	0.26	0.21	0.52	4,626
Total	6.81	5.80	53.5	0.11	0.08	0.68	0.76	0.08	0.21	0.29	—	11,717	11,717	0.69	0.54	1.33	11,896
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	0.73	0.63	5.85	0.01	0.01	0.07	0.08	0.01	0.02	0.03	—	1,140	1,140	0.07	0.05	2.13	1,160
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unenclos ed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.43	0.38	3.53	0.01	0.01	0.04	0.05	< 0.005	0.01	0.02	—	699	699	0.04	0.03	1.31	711
Total	1.16	1.00	9.38	0.02	0.01	0.12	0.13	0.01	0.04	0.05	—	1,840	1,840	0.11	0.08	3.45	1,871

4.1.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	4.32	3.25	35.5	0.07	0.05	0.41	0.46	0.05	0.13	0.18	—	7,478	7,478	0.41	0.31	31.4	7,612

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	2.61	2.03	22.3	0.05	0.03	0.26	0.30	0.03	0.08	0.11	—	4,761	4,761	0.25	0.20	20.0	4,845
Total	6.93	5.28	57.9	0.12	0.08	0.68	0.76	0.08	0.21	0.29	—	12,238	12,238	0.66	0.51	51.4	12,457
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	4.25	3.57	32.9	0.07	0.05	0.41	0.46	0.05	0.13	0.18	—	7,160	7,160	0.43	0.33	0.81	7,269
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	2.56	2.23	20.6	0.04	0.03	0.26	0.30	0.03	0.08	0.11	—	4,558	4,558	0.26	0.21	0.52	4,626
Total	6.81	5.80	53.5	0.11	0.08	0.68	0.76	0.08	0.21	0.29	—	11,717	11,717	0.69	0.54	1.33	11,896
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.73	0.63	5.85	0.01	0.01	0.07	0.08	0.01	0.02	0.03	—	1,140	1,140	0.07	0.05	2.13	1,160
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Unenclos Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	0.43	0.38	3.53	0.01	0.01	0.04	0.05	< 0.005	0.01	0.02	—	699	699	0.04	0.03	1.31	711
Total	1.16	1.00	9.38	0.02	0.01	0.12	0.13	0.01	0.04	0.05	—	1,840	1,840	0.11	0.08	3.45	1,871

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,606	1,606	0.11	0.02	—	1,614
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	493	493	0.03	< 0.005	—	495
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	104	104	0.01	< 0.005	—	104
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	299	299	0.02	< 0.005	—	301
Total	—	—	—	—	—	—	—	—	—	—	—	2,502	2,502	0.18	0.03	—	2,514
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,606	1,606	0.11	0.02	—	1,614
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	493	493	0.03	< 0.005	—	495
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	104	104	0.01	< 0.005	—	104
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	299	299	0.02	< 0.005	—	301
Total	—	—	—	—	—	—	—	—	—	—	—	2,502	2,502	0.18	0.03	—	2,514
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	266	266	0.02	< 0.005	—	267
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	81.6	81.6	0.01	< 0.005	—	82.0
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	17.2	17.2	< 0.005	< 0.005	—	17.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	49.6	49.6	< 0.005	< 0.005	—	49.8
Total	—	—	—	—	—	—	—	—	—	—	—	414	414	0.03	< 0.005	—	416

4.2.2. Electricity Emissions By Land Use - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,598	1,598	0.11	0.02	—	1,605
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	493	493	0.03	< 0.005	—	495
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	104	104	0.01	< 0.005	—	104
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	293	293	0.02	< 0.005	—	294
Total	—	—	—	—	—	—	—	—	—	—	—	2,487	2,487	0.18	0.02	—	2,499
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,598	1,598	0.11	0.02	—	1,605
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	493	493	0.03	< 0.005	—	495
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	104	104	0.01	< 0.005	—	104
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	293	293	0.02	< 0.005	—	294
Total	—	—	—	—	—	—	—	—	—	—	—	2,487	2,487	0.18	0.02	—	2,499
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartmen ts	—	—	—	—	—	—	—	—	—	—	—	265	265	0.02	< 0.005	—	266
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	81.6	81.6	0.01	< 0.005	—	82.0
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	17.2	17.2	< 0.005	< 0.005	—	17.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	48.5	48.5	< 0.005	< 0.005	—	48.7
Total	—	—	—	—	—	—	—	—	—	—	—	412	412	0.03	< 0.005	—	414

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	0.04	0.75	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	947	947	0.08	< 0.005	—	949
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclos ed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.7	24.7	< 0.005	< 0.005	—	24.8
Total	0.04	0.77	0.33	< 0.005	0.06	—	0.06	0.06	—	0.06	—	972	972	0.09	< 0.005	—	974

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.04	0.75	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	947	947	0.08	< 0.005	—	949
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.7	24.7	< 0.005	< 0.005	—	24.8
Total	0.04	0.77	0.33	< 0.005	0.06	—	0.06	0.06	—	0.06	—	972	972	0.09	< 0.005	—	974
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	0.14	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	157	157	0.01	< 0.005	—	157
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.09	4.09	< 0.005	< 0.005	—	4.11
Total	0.01	0.14	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	161	161	0.01	< 0.005	—	161

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.04	0.72	0.31	< 0.005	0.06	—	0.06	0.06	—	0.06	—	915	915	0.08	< 0.005	—	918
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.7	24.7	< 0.005	< 0.005	—	24.7
Total	0.04	0.74	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	940	940	0.08	< 0.005	—	943
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.04	0.72	0.31	< 0.005	0.06	—	0.06	0.06	—	0.06	—	915	915	0.08	< 0.005	—	918
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.7	24.7	< 0.005	< 0.005	—	24.7
Total	0.04	0.74	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	940	940	0.08	< 0.005	—	943
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartmen Mid Rise	0.01	0.13	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	152	152	0.01	< 0.005	—	152
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclos ed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.08	4.08	< 0.005	< 0.005	—	4.09
Total	0.01	0.14	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	156	156	0.01	< 0.005	—	156

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	53.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consume r Products	4.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscap e Equipme nt	1.89	0.16	16.7	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6
Total	59.0	0.16	16.7	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	4.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	4.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.24	0.02	2.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.83	5.83	< 0.005	< 0.005	—	5.85
Total	2.15	0.02	2.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.83	5.83	< 0.005	< 0.005	—	5.85

4.3.1. Mitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	40.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	3.84	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.89	0.16	16.7	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6
Total	46.3	0.16	16.7	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.84	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	4.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.24	0.02	2.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.83	5.83	< 0.005	< 0.005	—	5.85
Total	1.82	0.02	2.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.83	5.83	< 0.005	< 0.005	—	5.85

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	17.0	103	120	0.07	0.04	—	133
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	1.68	1.68	< 0.005	< 0.005	—	1.69
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.50	15.1	17.6	0.01	0.01	—	19.5
Total	—	—	—	—	—	—	—	—	—	—	19.5	119	139	0.08	0.04	—	154
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	17.0	103	120	0.07	0.04	—	133
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	1.68	1.68	< 0.005	< 0.005	—	1.69
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.50	15.1	17.6	0.01	0.01	—	19.5
Total	—	—	—	—	—	—	—	—	—	—	19.5	119	139	0.08	0.04	—	154

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	2.82	17.0	19.8	0.01	0.01	—	22.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.28	0.28	< 0.005	< 0.005	—	0.28
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.41	2.49	2.91	< 0.005	< 0.005	—	3.23
Total	—	—	—	—	—	—	—	—	—	—	3.24	19.8	23.0	0.01	0.01	—	25.5

4.4.1. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	14.7	88.8	104	0.06	0.03	—	115
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	1.68	1.68	< 0.005	< 0.005	—	1.69
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.50	15.1	17.6	0.01	0.01	—	19.5

Total	—	—	—	—	—	—	—	—	—	—	17.2	106	123	0.07	0.04	—	136
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	14.7	88.8	104	0.06	0.03	—	115
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	1.68	1.68	< 0.005	< 0.005	—	1.69
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.50	15.1	17.6	0.01	0.01	—	19.5
Total	—	—	—	—	—	—	—	—	—	—	17.2	106	123	0.07	0.04	—	136
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	2.44	14.7	17.1	0.01	0.01	—	19.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.28	0.28	< 0.005	< 0.005	—	0.28
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.41	2.49	2.91	< 0.005	< 0.005	—	3.23
Total	—	—	—	—	—	—	—	—	—	—	2.86	17.5	20.3	0.01	0.01	—	22.5

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	28.8	0.00	28.8	2.88	0.00	—	101
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	8.94	0.00	8.94	0.89	0.00	—	31.3
Total	—	—	—	—	—	—	—	—	—	—	37.8	0.00	37.8	3.77	0.00	—	132
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	28.8	0.00	28.8	2.88	0.00	—	101
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	8.94	0.00	8.94	0.89	0.00	—	31.3
Total	—	—	—	—	—	—	—	—	—	—	37.8	0.00	37.8	3.77	0.00	—	132
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	4.77	0.00	4.77	0.48	0.00	—	16.7
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	1.48	0.00	1.48	0.15	0.00	—	5.18
Total	—	—	—	—	—	—	—	—	—	—	6.25	0.00	6.25	0.62	0.00	—	21.9

4.5.1. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	28.8	0.00	28.8	2.88	0.00	—	101

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	8.94	0.00	8.94	0.89	0.00	—	31.3
Total	—	—	—	—	—	—	—	—	—	—	37.8	0.00	37.8	3.77	0.00	—	132
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	28.8	0.00	28.8	2.88	0.00	—	101
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	8.94	0.00	8.94	0.89	0.00	—	31.3
Total	—	—	—	—	—	—	—	—	—	—	37.8	0.00	37.8	3.77	0.00	—	132
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	4.77	0.00	4.77	0.48	0.00	—	16.7
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Unenclos Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	1.48	0.00	1.48	0.15	0.00	—	5.18
Total	—	—	—	—	—	—	—	—	—	—	6.25	0.00	6.25	0.62	0.00	—	21.9

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.28	1.28
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.38	1.38
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.28	1.28
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.38	1.38
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23

4.6.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.28	1.28
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.38	1.38
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.28	1.28
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.38	1.38
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.7.2. Mitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.8.2. Mitigated

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

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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.9.2. Mitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

Sequeste	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequeste red	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/26/2022	8/23/2022	5.00	20.0	—
Site Preparation	Site Preparation	8/24/2022	8/26/2022	5.00	2.00	—
Grading	Grading	8/27/2022	9/1/2022	5.00	4.00	—
Building Construction	Building Construction	9/2/2022	6/9/2023	5.00	200	—
Paving	Paving	6/10/2023	6/24/2023	5.00	10.0	—
Architectural Coating	Architectural Coating	6/25/2023	8/20/2023	5.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	6.50	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	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	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	197	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	40.2	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	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	39.4	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

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	6.50	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	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	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	197	18.5	LDA,LDT1,LDT2

Building Construction	Vendor	40.2	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	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	39.4	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	360,972	120,324	158,745	52,915	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
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Demolition	0.00	0.00	0.00	520	—
Site Preparation	—	—	1.88	0.00	—
Grading	—	—	4.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Enclosed Parking with Elevator	0.00	100%
Unenclosed Parking with Elevator	0.00	100%
Strip Mall	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2022	0.00	690	0.05	0.01
2023	0.00	690	0.05	0.01

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMt/Weekday	VMt/Saturday	VMt/Sunday	VMt/Year
Apartments Mid Rise	1,164	1,051	875	403,940	8,886	8,020	6,681	3,083,276
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	693	658	320	231,693	5,668	5,376	2,613	1,894,264

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	1,164	1,051	875	403,940	8,886	8,020	6,681	3,083,276
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	693	658	320	231,693	5,668	5,376	2,613	1,894,264

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

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)
360972.45	120,324	158,745	52,915	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00

Summer Days	day/yr	250
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5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	849,073	690	0.0489	0.0069	2,954,272
Enclosed Parking with Elevator	260,467	690	0.0489	0.0069	0.00
Unenclosed Parking with Elevator	54,866	690	0.0489	0.0069	0.00
Strip Mall	158,256	690	0.0489	0.0069	77,157

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	844,673	690	0.0489	0.0069	2,856,233
Enclosed Parking with Elevator	260,467	690	0.0489	0.0069	0.00
Unenclosed Parking with Elevator	54,866	690	0.0489	0.0069	0.00
Strip Mall	154,850	690	0.0489	0.0069	76,948

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	7,976,593	0.00
Enclosed Parking with Elevator	0.00	0.00
Unenclosed Parking with Elevator	0.00	167,454
Strip Mall	1,170,346	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	6,899,753	0.00
Enclosed Parking with Elevator	0.00	0.00
Unenclosed Parking with Elevator	0.00	167,454
Strip Mall	1,170,346	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	53.5	0.00
Enclosed Parking with Elevator	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00
Strip Mall	16.6	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	53.5	0.00
Enclosed Parking with Elevator	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00
Strip Mall	16.6	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

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

Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

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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5.18.1.2. Mitigated

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

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

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

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

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	17.4	annual days of extreme heat
Extreme Precipitation	5.65	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ 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 (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth 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 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack	N/A	N/A	N/A	N/A
Air Quality	0	0	0	N/A

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

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

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

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	1	1	1	2

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

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
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Exposure Indicators	—
AQ-Ozone	88.7
AQ-PM	68.9
AQ-DPM	86.2
Drinking Water	83.1
Lead Risk Housing	61.0
Pesticides	0.00
Toxic Releases	60.5
Traffic	70.1
Effect Indicators	—
CleanUp Sites	91.7
Groundwater	0.00
Haz Waste Facilities/Generators	30.2
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	94.9
Cardio-vascular	89.9
Low Birth Weights	82.0
Socioeconomic Factor Indicators	—
Education	83.8
Housing	79.1
Linguistic	93.3
Poverty	76.1
Unemployment	44.4

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	18.04183241
Employed	62.37649172
Education	—
Bachelor's or higher	31.86192737
High school enrollment	100
Preschool enrollment	26.30565892
Transportation	—
Auto Access	6.005389452
Active commuting	93.07070448
Social	—
2-parent households	90.54279482
Voting	20.65956628
Neighborhood	—
Alcohol availability	17.52855126
Park access	22.68702682
Retail density	70.40934172
Supermarket access	94.25125112
Tree canopy	53.49672783
Housing	—
Homeownership	10.70191197
Housing habitability	7.853201591
Low-inc homeowner severe housing cost burden	17.54138329
Low-inc renter severe housing cost burden	39.94610548
Uncrowded housing	16.61747722
Health Outcomes	—

Insured adults	19.74849224
Arthritis	29.1
Asthma ER Admissions	7.4
High Blood Pressure	47.4
Cancer (excluding skin)	42.8
Asthma	34.7
Coronary Heart Disease	10.9
Chronic Obstructive Pulmonary Disease	16.6
Diagnosed Diabetes	17.6
Life Expectancy at Birth	45.0
Cognitively Disabled	3.3
Physically Disabled	19.5
Heart Attack ER Admissions	4.9
Mental Health Not Good	23.2
Chronic Kidney Disease	20.1
Obesity	25.3
Pedestrian Injuries	19.6
Physical Health Not Good	15.2
Stroke	13.0
Health Risk Behaviors	—
Binge Drinking	73.8
Current Smoker	27.2
No Leisure Time for Physical Activity	20.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	37.8

Elderly	44.5
English Speaking	2.6
Foreign-born	85.1
Outdoor Workers	3.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	36.0
Traffic Density	78.4
Traffic Access	87.4
Other Indices	—
Hardship	77.9
Other Decision Support	—
2016 Voting	21.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	91.0
Healthy Places Index Score for Project Location (b)	28.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Total lot acreage is 1.08 acres, with 178,258 sqft of residential space distributed across 5 levels.
Construction: Construction Phases	Longer architectural coating phase to reflect steady work for a smaller painting crew.
Operations: Hearths	Proposed project will not have hearths or wood stoves.
Operations: Water and Waste Water	Proposed Project is located in an urban area and will not involve septic or facultative lagoons.