



Toll Brothers Laguna Hills Townhome Project Construction Health Risk Assessment

**City of Laguna Hills, California
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City of Laguna Hills, California

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1.0 Introduction

1.1 Purpose of Report & Study Objectives

The purpose of this Health Risk Assessment (HRA) is to evaluate the potential health risks generated from the construction of the Toll Brothers Laguna Hills Townhome Project (hereinafter referred to as "project").

This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the State of California Office of Environmental Health Hazard Assessment (OEHHA), California Air Resources Board (CARB), and the Southern California Air Quality Management District (SCAQMD) recommendations for quantification of emissions and evaluation of potential impacts.

1.2 Site Location & Project Description

The proposed project site will be constructed on the 2.43-acre parcel at 23161 Mill Creek Drive (APN 588-142-07) in the City of Laguna Hills, Orange County, California (Project Site). The project site is located on the west side of Mill Creek Drive, approximately 0.27 miles south of the Lake Forest Drive, Mill Creek Drive, and Scientific Intersection. The project site is currently developed with a two-story office building, surface parking lot, and associated landscaping and pavement. **Exhibit A** shows the location map of the proposed project.

The proposed project consists of the demolition of the existing office building and associated surface parking lot and landscaping to construct 36 single-family-attached condominium residential units, parking, roadways, and associated infrastructure at a density of 14.8 dwelling units per acre (du/ac). Two units will be deed-restricted for very low-income households, while the remaining 34 units are designated as above-moderate income.

Construction activities are expected to consist of demolition, site preparation, grading, building construction, paving, and architectural coating. During construction, the project would demolish approximately 34,200 square feet of building area, 29,461 square feet of asphalt, and 5,000 square feet of hardscape. The project would require the import/export of up to approximately 35,000 cubic yards of earthwork material for grading purposes. All mobile off-road diesel construction equipment including generators will be equipped with Tier 4 low emission "clean diesel" engines.

Exhibit B shows the proposed site plan used for this analysis.

1.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases.

For CEQA purposes, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours or longer, such as residences, hospitals, and schools (etc.), as described in the Localized Significance Threshold Methodology (SCAQMD 2008a, page 3-2). The sensitive receptors near the project site are listed below.

A project site location map, including sensitive receptor locations, is provided in **Exhibit A**.

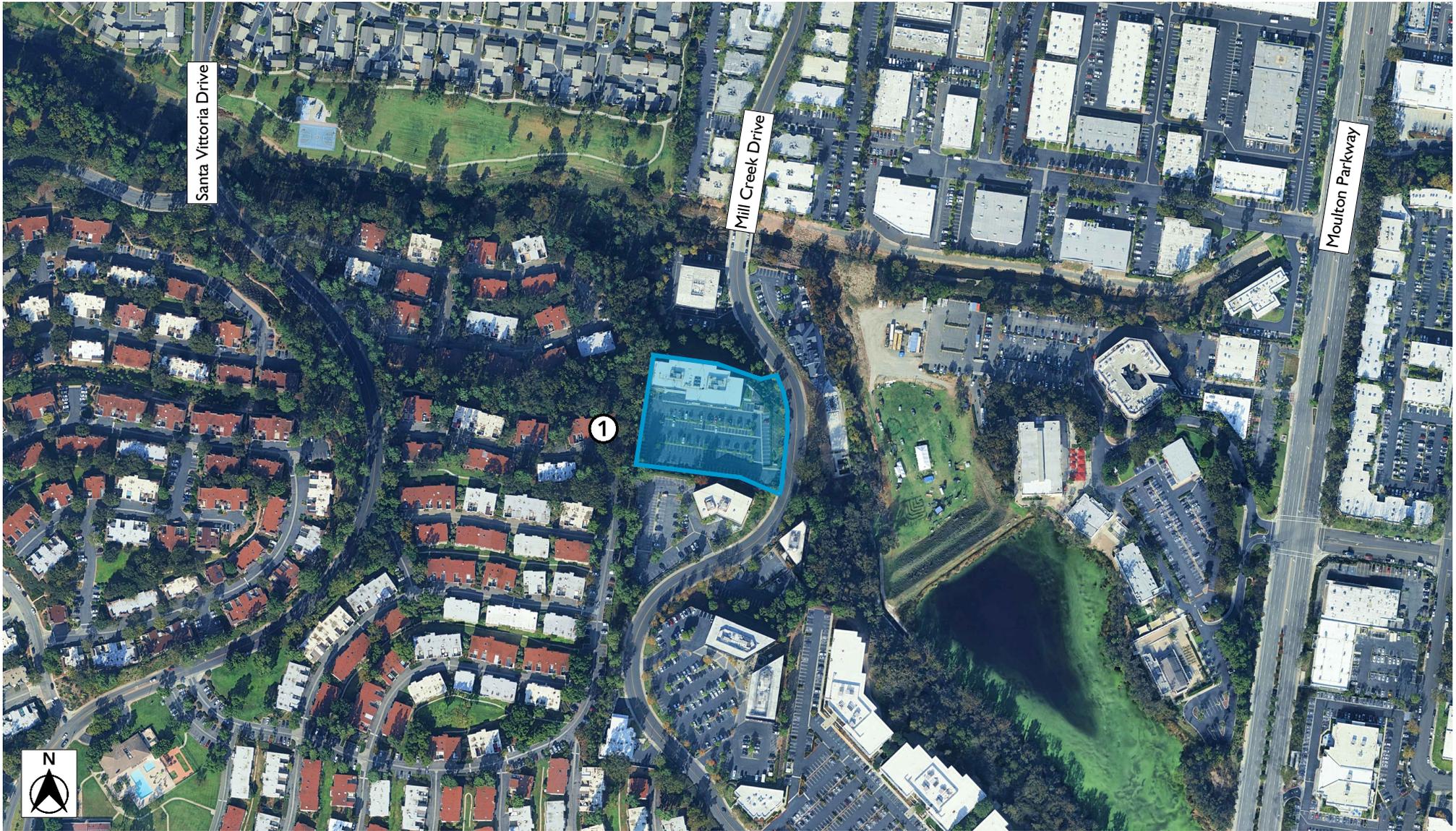
Receptor-1 Existing residential land uses located to the west of the proposed project site. The nearest residential home located at Receptor-1 (marked as circle "1" on **Exhibit A**) is located approximately 80 feet (~24 meters) west of the project site's western boundary.

1.4 Summary of Analysis Results

The analysis results indicate that the maximum estimated unmitigated construction-related cancer risk is approximately 2.6625 in one million, which is well below the SCAQMD significance threshold of 10. Therefore, **construction-related cancer risk impacts would be less than significant.**

The maximum estimated unmitigated non-cancer chronic hazard index at this location is approximately 0.0039, which is well below the SCAQMD significance threshold of 1.0. Therefore, **construction-related non-cancer health risk impacts would be less than significant.**

Finally, the unmitigated construction-related cancer burden at this location is approximately 0.0014, which does not exceed the SCAQMD significance threshold of 0.5. Therefore, **unmitigated construction-related cancer burden impacts would be less than significant.**



Legend

- ① = Sensitive Receptor Location
- = Project Site Boundary

Exhibit A
Location Map



Exhibit B

Site Plan

2.0 Regulatory Setting

The following section provides background information on toxic air contaminants (TACs) and the applicable federal, state, and local regulations for controlling them.

2.1 Description of Toxic Air Contaminants (TACs)

The following section describes the toxic air contaminants (TACs) of concern related to the project. The California Health and Safety Code (California State Assembly, 1983) defines a TAC as an air pollutant that can cause or contribute to increased mortality or serious illness or pose a present or potential hazard to human health. Under federal law, any substance listed as a hazardous air pollutant under Section 112(b) of the Clean Air Act (42 U.S.C. Section 7412[b]) is also considered a TAC. In California, the California Environmental Protection Agency (Cal/EPA), through the California Air Resources Board (CARB), may identify a substance as a TAC if it determines that the substance may cause or contribute to serious health effects.

To date, CARB has identified over 200 compounds as TACs, several of which are subject to control measures due to their elevated health risks and potential for effective regulation. Unlike criteria air pollutants, which have established ambient air quality standards and defined threshold levels, there is no safe level of exposure for many carcinogenic TACs. Even low concentrations may pose health risks, particularly for long-term exposures.

The majority of estimated health risk from TACs is attributed to a small number of compounds, with diesel particulate matter (DPM) representing the most significant contributor statewide. DPM consists of fine carbon particles coated with toxic organic compounds, and its small size allows it to penetrate deep into the lungs. In 1998, CARB identified DPM as a TAC based on evidence linking diesel exhaust exposure to lung cancer and other adverse health outcomes. In 2012, the World Health Organization's International Agency for Research on Cancer (IARC) classified diesel engine exhaust as "carcinogenic to humans," reinforcing CARB's earlier determination.

In addition to DPM, other TACs that contribute to overall health risk in California include benzene, 1,3-butadiene, and formaldehyde. These pollutants, while typically present at low ambient concentrations, are associated with increased cancer risk. CARB and the South Coast Air Quality Management District (SCAQMD) maintain air monitoring networks throughout the South Coast Air Basin (SCAB) to assess ambient TAC concentrations and evaluate potential health risks. DPM is not directly measured in ambient air but is estimated using fine particulate matter data and source apportionment studies. According to CARB, diesel engine emissions are estimated to account for approximately 70 percent of the known statewide cancer risk attributable to TAC exposure.

2.2 Federal Regulation of TACs

At the federal level, toxic air contaminants—referred to as hazardous air pollutants (HAPs)—are regulated under the Clean Air Act (CAA), primarily through Section 112. The U.S. Environmental

Protection Agency (EPA) has identified 188 HAPs known or suspected to cause cancer or other serious health effects. To control emissions of these pollutants, the EPA establishes National Emission Standards for Hazardous Air Pollutants (NESHAPs), which apply to specific industrial source categories. These standards mandate the implementation of Maximum Achievable Control Technology (MACT) to reduce emissions effectively.

The EPA regularly reviews and updates NESHAPs to incorporate advancements in emission control technologies and to address residual risks. Compliance with these federal regulations is enforced through permitting processes and regular inspections, ensuring that facilities adhere to established emission limits and implement necessary control technologies.

2.3 State Regulation of TACs

The State of California's regulatory authority is distributed across several agencies and legislative programs that support health risk evaluations and emissions control, as discussed in the following sections.

2.3.1 State Agencies and Guidance Documents

2.3.1.1 California Air Resources Board (CARB)

The California Air Resources Board (CARB) is a department within the California Environmental Protection Agency that oversees State of California air quality programs. CARB's responsibilities include setting the State's air quality standards, identifying pollutants that pose the greatest health risks, measuring pollution reduction progress, researching causes, effects, and potential solutions of air pollution problems, and determining the costs and benefits of pollution controls.

CARB is also responsible for identifying TACs under the Toxic Air Contaminant Identification and Control Act (AB 1807, 1983) and establishing Airborne Toxic Control Measures (ATCMs) to reduce emissions.

CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB Handbook, 2005) and the *Technical Advisory: Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways* (2017) to serve as reference guides for assessing and mitigating potential air pollution impacts from new projects in the land use decision making process. Per the CARB Handbook, both respiratory and other non-cancer health effects have been linked to high-traffic roadways. Furthermore, research indicates that diesel exhaust and other carcinogenic chemicals from vehicles significantly contribute to the overall cancer risk from airborne toxins in California. The CARB Handbook advises planning agencies to consider how the layout of new developments can minimize population exposure and risk. For instance, avoiding the placement of new sensitive land uses within 500 feet of freeways, urban roads with 100,000 or more vehicles per day, or rural roads with 50,000 or more vehicles per day can help reduce exposure and risk.

2.3.1.2 Office of Environmental Health Hazard Assessment (OEHHA)

OEHHA is the lead agency for developing health-based guidance values used in risk assessments, including Reference Exposure Levels (RELs) for non-cancer effects and Cancer Potency Factors (CPFs) for carcinogens. These values are central to evaluating TAC risks in both regulatory and CEQA contexts.

In partnership with CARB, OEHHA developed the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (2015). This manual aids in implementing the Air Toxics Hot Spots Program (Health and Safety Code Section 44360). It details health effect values, exposure pathways (such as breathing rates), and a tiered approach for conducting HRAs based on the latest scientific and policy insights. The manual's goals include addressing children's health concerns, updating risk assessment practices, and standardizing risk assessment procedures.

2.3.1.3 California Air Pollution Control Officers Association (CAPCOA)

In 2009, CAPCOA released guidelines on evaluating health risks associated with proposed land use projects. These guidelines focus on the acute, chronic, and cancer impacts of sources regulated by the California Environmental Quality Act (CEQA). They provide recommendations on when a project should undergo further risk evaluation, how to perform Health Risk Assessments (HRAs), how to involve the public, what to do with the HRA results, and what mitigation measures might be suitable for different land use projects.

2.3.2 Legislative Framework for TAC and Risk Programs

2.3.2.1 Toxic Air Contaminant Identification and Control Act (AB 1807)

California's Air Toxics Program, established under the Toxic Air Contaminant Identification and Control Act (AB 1807), aims to reduce public exposure to harmful airborne substances through a two-step process: risk identification and risk management. In the first step, CARB and OEHHA assess the health risks and exposure potential of candidate substances to determine if they should be classified as Toxic Air Contaminants (TACs), with public input and scientific review playing key roles. If a substance is designated as a TAC, CARB then collaborates with local air districts, industry, and the public to develop appropriate control measures based on emissions data, exposure levels, health risks, and control technology feasibility. As of now, CARB has identified around 200 TACs and implemented 26 control measures targeting both mobile and stationary sources.

2.3.2.2 Air Toxics Hot Spots Act (AB 2588)

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588), enacted in 1987, mandates that stationary sources report the types and quantities of specific air pollutants they routinely emit. Its primary objectives are to gather emissions data, identify facilities with localized air quality impacts, assess associated health risks, notify nearby residents of significant risks, and ensure those risks are mitigated to acceptable levels.

2.3.2.3 Community Air Protection Program (AB 617)

AB 617 (2017) mandates annual emissions reporting for certain stationary sources and directs CARB to develop community-scale air monitoring in high priority locations. In response to AB 617, CARB established the Community Air Protection Program. The focus of the Program is to reduce exposure to communities most impacted by air pollution. The program focuses on both criteria air pollutants and TACs, with real-time data made available to the public.

2.4 Regional Regulation of TACs

2.4.1 South Coast Air Quality Management District (SCAQMD)

The South Coast Air Quality Management District (SCAQMD) is the regional agency responsible for regulating air quality in the South Coast Air Basin, encompassing Orange County and the non-desert regions of Los Angeles, Riverside, and San Bernardino counties. SCAQMD develops and enforces rules to reduce emissions from stationary sources, administers permitting programs, and implements air quality management plans to achieve compliance with federal and state air quality standards.

2.4.1.1 SCAQMD Health Risk Assessment (HRA) Procedures

The SCAQMD published the most recent version of their *South Coast Air Quality Management District Risk Assessment Procedures for Rules 1401, 1401.1, and 212* (SCAQMD Guidelines) in October 2024. These guidelines describe the Risk Assessment Procedures, pursuant to Rule 1401(e)(1), for preparing HRAs. The SCAQMD Guidelines are intended to be a “living” document and contain required assumptions, incorporating OEHHA guidance, for risk assessment calculations.

2.4.1.2 Relevant SCAQMD Rules and Regulations

The SCAQMD Rules applicable to TAC emissions include, but are not limited to, the following:

- **Rule 1401 - New Source Review of Toxic Air Contaminants.** Rule 1401 sets risk-based thresholds for new, relocated, or modified equipment that emits TACs. It aims to limit maximum individual cancer risk (MICR), cancer burden, and noncancer hazard indices (acute and chronic) from these sources. The rule applies to permit applications submitted on or after June 1, 1990, including previously unpermitted equipment if the permit to operate was filed after that date. It also covers certain equipment exempt from written permits under Rule 219 if associated health risks exceed specified levels.
- **Rule 1401.1 - Requirements for New and Relocated Facilities Near Schools.** Rule 1401.1 provides enhanced health protections for children by regulating toxic air emissions from new or relocated facilities near schools or schools under construction. It does not apply to existing facilities. Permit applications for such facilities are evaluated based on this rule, the toxic air contaminant list in Rule 1401, and current risk assessment procedures at the time the application is deemed complete.

- **Rule 1402 - Control of Toxic Air Contaminants from Existing Sources.** Rule 1402 aims to reduce health risks from toxic air emissions at existing facilities by establishing limits for maximum individual cancer risk (MICR), cancer burden, and noncancer hazard indices (acute and chronic). Facilities exceeding specified risk levels must prepare Risk Reduction Plans to comply with health thresholds. The rule requires submission of Air Toxics Inventory Reports, Health Risk Assessments, and public notifications, and applies to facilities identified under the Hot Spots Act or those with emissions potentially exceeding the Notification Risk Level.
- **Rule 212 - Standards for Approving Permits and Issuing Public Notice.** Rule 212 outlines the criteria under which the Executive Officer may approve or deny permits for equipment that emits or controls air contaminants. Permits are denied if equipment is not expected to comply with air quality rules or is not constructed as approved. Public notification is required at least 30 days in advance for certain new or modified projects, especially those near schools (within 1,000 feet), or those with emission increases exceeding specified thresholds or toxic risk levels. The rule also details procedures for public notification distribution, appeal timelines, and responsibilities of applicants in informing the community. It applies retroactively to unpermitted equipment and facilities with emissions triggering risk-based thresholds.

3.0 Environmental Setting

The following section provides background information on the existing location and environmental setting in the vicinity of the proposed project site.

3.1 South Coast Air Basin (SCAB)

The proposed project site is located in the City of Laguna Hills, California, within the South Coast Air Basin (SCAB), which falls under the jurisdiction of the SCAQMD. The SCAB includes all of Orange County and parts of Los Angeles, Riverside, and San Bernardino counties. Air quality in the basin is influenced by dominant airflows, topography, atmospheric inversions, location, season, and time of day.

3.2 Local Climate and Meteorology

Dominant airflows are the primary mechanism for the transport and dispersion of air pollution within the SCAB. The San Gabriel, San Bernardino, and San Jacinto Mountains border the northern and eastern extents of the air basin and provide a natural barrier to the dispersion of air contaminants.

The SCAQMD maintains 26 meteorological data collection stations throughout the District's jurisdiction. Meteorological data from the 5 most recent years that meet the established completeness criteria is processed by the SCAQMD for use in dispersion modeling. Other information provided includes station details, surface characteristics, and temperature ranges.

The nearest meteorological data collection station to the proposed project site is the Mission Viejo (MSVJ) station. For the purposes of this analysis, meteorological data for the MSVJ station collected in the years 2017 through 2021 are used to represent local weather conditions and prevailing winds. **Exhibit C** shows the wind rose from data measured at this station and the wind patterns for the project area.

In addition to the above-mentioned SCAQMD meteorological data stations, the Western Regional Climate Center (WRCC) maintains weather monitoring stations throughout Southern California and parts of Arizona and Nevada. The nearest WRCC weather station to the proposed project site is the Laguna Beach, CA (044647) station. Climatological data from this station is summarized in **Table 3-1**.

Table 3-1 | Meteorological Summary¹

Month	Temperature (°F)			Mean Precipitation (inches)
	Max.	Min.	Mean	
January	65.1	43.0	54.1	2.43
February	66.1	44.1	55.1	2.77
March	67.1	45.8	56.5	2.01
April	69.0	48.4	58.7	0.98
May	70.9	53.0	62.0	0.25
June	73.1	56.1	64.6	0.10
July	76.5	59.3	67.9	0.03
August	78.1	59.6	68.9	0.07
September	77.5	58.2	67.9	0.26
October	74.5	53.7	64.1	0.47
November	70.4	47.5	59.0	1.24
December	66.1	43.4	54.8	1.92
Annual	71.2	51.0	61.1	12.52

¹Source: Western Regional Climate Center. Averages derived from measurements recorded between 1928 and 2016 at Laguna Beach, CA (044647).

3.3 Local Background Health Risks

The project site is located within a region that has been characterized for existing ambient health risks as part of the SCAQMD’s Multiple Air Toxics Exposure Study V (MATES-V). MATES-V is the latest iteration of the SCAQMD’s monitoring and modeling effort conducted to assess long-term population exposure to air toxics in the SCAB. The study evaluates both cancer and non-cancer health risks based on regional ambient air quality data and dispersion modeling.

Table 3-2 below shows the regional lifetime cancer risk and non-cancer chronic hazard index reported by MATES-V for the project site area. These values are compared to the corresponding figures for the County of Orange as a whole. The values shown in **Table 3-2** reflect continuous exposure over a 70-year lifetime to existing background levels of TACs in their respective regions.

As shown in the table below, the lifetime cancer risk in the project area is approximately 325 per one million, and the non-cancer chronic hazard index is approximately 4.5. In comparison, the average lifetime cancer risk for Orange County is reported at approximately 390 per one million.

Table 3-2 | Regional Health Risk Estimates

Region/Area	Lifetime Cancer Risk (per one million)	Chronic Non-Cancer Hazard Index
Project Vicinity ¹	325	4.5
Orange County ²	390	Not Reported

¹Source: MATES-V Online Data Visualization Tool. [MATES Data Visualization](#).

²Source: SCAQMD. Multiple Toxics Exposure Study in the South Coast AQMD Final Report, Table 4-8: County-Wide Population-Weighted Air Toxics Cancer Risk for Inhalation-Only and for Multiple-Pathway Factors (August 2021).

It should be noted that the previous MATES-IV version of the study, released in 2015, estimated a higher cancer risk of approximately 555.85 per one million for the project site vicinity. The reduction between MATES-IV and MATES-V is largely attributed to mobile source regulations, cleaner technology adoption, and fleet turnover.

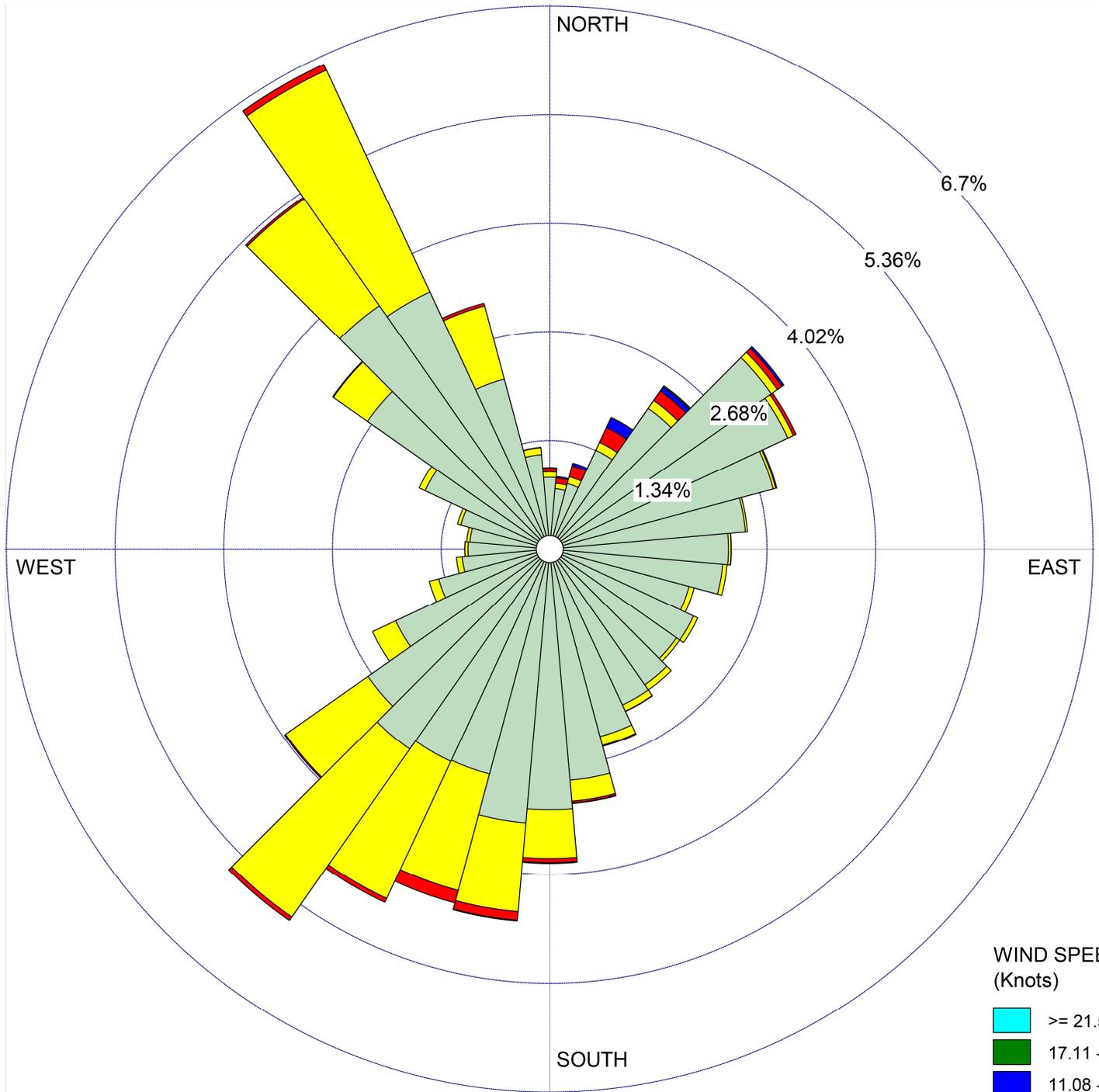


Exhibit C

Wind Rose Plot - Mission Viejo (MSVJ) Station

4.0 Modeling Parameters and Assumptions

The AERMOD Gaussian Plume Air Dispersion Model Version 13.0.0 (AERMOD) was used to calculate TAC emissions from the construction of the project. AERMOD is a regulatory air quality dispersion model developed by the American Meteorological Society and the Environmental Protection Agency (EPA). It is used to estimate the dispersion of air pollutants from stationary and mobile sources, taking into account various factors such as terrain, meteorology, and the nature of the pollutant sources. The assumptions and modeling parameters used for this analysis are described below.

For this analysis, emissions rates input into AERMOD were derived from the California Emissions Estimator Model (CalEEMod). CalEEMod is the state-approved tool for estimating criteria pollutant and TAC emissions from construction and operational activities, based on activity type, equipment fleet, and duration of use. Exhaust PM₁₀ emissions reported by CalEEMod were used as a surrogate for diesel particulate matter (DPM). These modeled emission rates served as inputs to AERMOD, which then calculated dispersion and receptor-specific concentrations for the health risk assessment.

CalEEMod emissions outputs are provided in **Appendix A**.

4.1 Construction Assumptions

Construction activities are expected to consist of demolition, site preparation, grading, building construction, paving, and architectural coating. During construction, the project would demolish approximately 34,200 square feet of building area, 29,461 square feet of asphalt, and 5,000 square feet of hardscape. The project would require the import/export of up to approximately 35,000 cubic yards of earthwork material for grading purposes. All mobile off-road diesel construction equipment including generators will be equipped with Tier 4 low emission “clean diesel” engines.

Diesel particulate matter (DPM) emissions will be generated from onsite construction equipment throughout all phases of construction. In addition, offsite DPM emissions will result from haul truck trips associated with demolition and grading activities. The methodology used to estimate both onsite and offsite construction-related DPM emissions is described below.

4.1.1 Offroad Equipment Emissions Assumptions

Weighted annual average DPM emission rates were developed from CalEEMod outputs for each year of construction. The project’s construction schedule and estimated DPM emissions are based on the *Toll Brothers Laguna Hills Townhome Project Air Quality, Greenhouse Gas, and Energy Impact Study, Laguna Hills, California, Appendix A - CalEEMod Emissions Calculations Outputs*. The PM₁₀ exhaust emissions reported in the Air Quality Study were utilized to calculate weighted averages for each year of construction. These weighted averages were applied as surrogates for DPM emissions within the air dispersion model.

Table 4-1 summarizes the weighted average PM₁₀ exhaust emission factors by construction year.

Because project construction is anticipated to occur for less than three years in total, only impacts to the most sensitive receptor groups, including third trimester and infants, were evaluated. Exposure frequency and duration were adjusted as appropriate to reflect the expected number of construction days and the overall construction schedule.

Table 4-1 | Annual Construction Emissions Factors by Phase

Exposure Period	Year of Construction	Annual Offroad DPM Emissions (tons/year)
Third Trimester	1	0.0036203
Infant	1-2	0.0029623

The emissions shown in **Table 4-1** above are represented in the model as an area source equal to the size of the project’s construction area within the air dispersion model. A representative release height of 3 meters was assumed to reflect the average exhaust elevation of typical construction equipment.

The locations of modeled construction-related emissions during the Third Trimester and Infant exposure scenarios are shown in **Exhibits D** and **E**, respectively. Emission factor calculation worksheets are provided in **Appendix B**.

4.1.2 Offsite Motor Vehicle Emissions Assumptions

During construction, the project would demolish approximately 34,200 square feet of building area, 29,461 square feet of asphalt, and 5,000 square feet of hardscape. In addition, the project would require the import/export of up to approximately 35,000 cubic yards of earthwork material for grading purposes.

Offsite vehicle source emissions were calculated using the following key inputs:

- Daily Truck Trips - the number of hauling trips per day;
- Vehicle Fleet Mix - the percentage breakdown of vehicle types (i.e., trucks by axle number); and
- Emission Factors - the amount of emissions generated as a function of vehicle type, vehicle speed, and pollutant for a given time or distance.

The CalEEMod default estimates for daily hauling trips associated with demolition and grading are 51 trips per day and 729 trips per day, respectively. To be conservative, offsite motor vehicle emissions were modeled based on 729 trips per day.

Consistent with default CalEEMod vehicle fleet mix assumptions, it is assumed that all hauling trips associated with project construction will consist of heavy-heavy duty (HHDT) vehicles. **Exhibit D** shows the locations of modeled operational roadway emissions sources.

Because offsite demolition and grading hauling activities would occur only during the first month of construction, associated emissions were modeled exclusively for the third trimester (0.25 year) exposure scenario. These emissions were not included in the infant (1-2 year) exposure scenario, as construction-related hauling would not occur during subsequent phases.

4.2 Air Dispersion Model Assumptions

Health risk impacts from DPM emissions were estimated using the AERMOD dispersion model. The results of the air dispersion model are provided in **Appendix C**.

4.2.1 Model Assumptions

The general model assumptions utilized for this analysis are shown in **Table 4-2**.

Table 4-2 | Dispersion Model Assumptions

Feature	Operation
Terrain Processing	Elevated terrain
Regulatory Dispersion Options	Default assumptions used
Land Use	Urban
Coordinate System	UTM
Building Downwash	Not included in calculations ¹
Receptor Height	0 meters

¹ Building downwash effects in AERMOD are only applicable to point source emissions. Since the construction phase does not include any point sources, building downwash is not considered in this analysis.

4.2.2 Emission Source Assumptions

Each emission source requires project-specific assumptions for use in AERMOD. **Table 4-3** summarizes the assumptions used to configure the emissions sources assessed in this analysis. For the purposes of this analysis, emission sources are sorted into two categories:

- **Area Source:** Represents emissions distributed over a specific area rather than a single point. The emissions are characterized by parameters such as the emission rate per unit area, the dimensions of the area, and the release height. For this analysis, area sources are utilized to represent onsite construction-related emissions.

- Line Source: Represents emissions distributed along a linear path, such as a roadway or railway. The emissions are characterized by parameters such as the emission rate per unit length, the length of the line, and the release height. For this analysis, line sources are utilized to represent the study roadways and areas of onsite vehicle travel.

Table 4-3 | Dispersion Model Source Configurations

Emission Source Type	Configuration	Relevant Assumptions
Onsite Construction Activity	Area Sources	<ul style="list-style-type: none"> • Source height: 3 meters (~9.84 feet)
Offsite Vehicle Traffic ¹	Line Sources	<ul style="list-style-type: none"> • 729 daily hauling trips • Stack release height: 3.5 meters (~11.48 feet) • Vehicle speeds: 25 m.p.h. along Mill Creek Drive • Vehicle Types: HHDT • Emission Factors: CARB EMFAC2025

¹ Emissions associated with offsite vehicle traffic are modeled during the third trimester (0.25 year) exposure scenario only, as hauling activity is expected to occur only during the demolition and grading phases of construction.

4.2.3 Meteorological Data

Meteorological data recorded over hourly intervals are also utilized within AERMOD to determine the direction and rate of dispersion of emissions released into the atmosphere. The SCAQMD maintains 26 meteorological data collection stations throughout the District’s jurisdiction. Meteorological data from the 5 most recent years that meet the established completeness criteria is processed by the SCAQMD for use in dispersion modeling. Other information provided includes station details, surface characteristics, and temperature ranges.

The nearest meteorological data collection station to the proposed project site is the Mission Viejo (MSVJ) station. For the purposes of this analysis, meteorological data for the MSVJ station collected in 2017 through 2021 are used to represent local weather conditions and prevailing winds.

4.2.4 Modeled Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution exposure. Individuals who may be more sensitive to toxic exposures than the general population are distributed throughout the total population. Sensitive populations may include young children and chronically ill individuals.

For the purposes of this analysis, receptors were modeled at the first row of sensitive structures facing the project site within each sensitive receptor group identified in **Section 1.3** of this report. In addition, the identified sensitive receptor locations were supplemented by the specification of a modeling grid

that extended around the proposed project and study area to identify other potential locations of impact.

Exhibit F shows the locations of each receptor placed in the air dispersion model.

4.3 Risk Assessment Methodology

DPM emissions sources associated with project construction include onsite construction activity and offsite hauling trips. The calculations used to calculate cancer risk are based on the methodology published by the SCAQMD and OEHHA.

For the purposes of this analysis, potential health risks to the adjacent receptors are expressed in terms of increased cancer and non-cancer health risks as a result of exposure to DPM emissions.

4.3.1 Cancer Health Risk Assessment Methodology

The cancer risk resulting from DPM emissions is calculated by multiplying the annual average DPM concentrations calculated using the AERMOD model at each receptor location and an inhalation exposure factor, as shown in the equation below.

$$Cancer\ Risk_{DPM} = Dose_{air} \times CPF \times ASF \times \frac{ED}{AT}$$

Where:

- $Dose_{air}$ = dose by inhalation (mg/kg/day), per age group;
- CPF = cancer potency factor, chemical specific (mg/kg/day);
- ASF = age sensitivity factor, per age group;
- ED = exposure duration (years); and
- AT = averaging time period over which exposure duration is averaged (70 years).

The dose by inhalation utilized for each age group was determined using the following equation.

$$Dose_{air, \text{ per age group}} = (C_{air} \times EF \times BR \times A \times CF)$$

Where:

- C_{air} = concentration of contaminant in air ($\mu\text{g}/\text{m}^3$);
- EF = exposure frequency (number of days per 365 days);
- BR = breathing rate per age group;

- A = inhalation absorption factor (default = 1); and
- CF = conversion factor (1x10⁻⁶, µg to mg, L to m³).

Table 4-3 shows the assumptions and values utilized in the above equations to calculate the cancer risk resulting from DPM exposure at each onsite receptor location.

It should be noted that, consistent with OEHHA and SCAQMD guidance, health risk assessments for construction-related DPM typically evaluate potential exposures for third trimester, infant, child, and adult receptors. However, because construction of the proposed project would occur over a relatively short duration of approximately six years, a full 30-year adult exposure scenario is not applicable. Accordingly, this analysis evaluates third trimester (0.25-year), infant (0-2 years), and child (2-16 years) exposure scenarios, which together represent the most sensitive potential life stages during the construction period. Excluding the adult exposure scenario is appropriate in this case, as no long-term operational source of DPM emissions would remain after construction is complete.

Cancer risk calculation worksheets are provided in **Appendix D**.

Table 4-4 | Cancer Risk Calculation Values for DPM Exposure

Receptor Category	Age Range (years)	CPF ¹ (mg/kg/day)	ASF ²	ED ³ (Years)	EF ⁴ (days/year)	BR ⁵ (L/kg per 8 hours)
3 rd Trimester	0.25	1.1	10	0.25	350	361
Infant	0-2		10	2		1,090

¹Inhalation cancer potency factor for Diesel Particulate Matter, per the OEHHA/ARB Approved Risk Assessment Health Values. <https://ww2.arb.ca.gov/sites/default/files/classic/toxics/healthval/contable01072025v2.pdf>.

²Age sensitivity factor, per the OEHHA Air Toxics Hot Spots Program Guidance Manual, Table 8.3: Age Sensitivity Factors by Age Group for Cancer Risk Assessment.

³ED = Exposure Duration.

⁴EF = Exposure frequency (number of days per 365 days). Per the OEHHA Air Toxics Hot Spots Program Guidance Manual, the recommended default exposure frequency is 350 days for residential receptors.

⁵Eight-hour breathing rate, per the OEHHA Air Toxics Hot Spots Program Guidance Manual, Table 5.6: Point Estimates of Residential Daily Breathing Rates for 3rd trimester, 0<2, 2<9, 2<16< 16<30 and 16-70 years (L/kg BW-day).

4.3.2 Non-Cancer Health Risk Characterization

Exposure to TACs can also cause non-cancer illnesses to individuals’ reproductive, respiratory, eye, kidney, blood, and nervous systems (etc.). Risk characterization for non-cancer health risks from TAC exposure is expressed as a hazard index (HI). The HI is a ratio of the predicted concentration of TACs to a concentration considered acceptable to public health professionals, termed the Reference Exposure Level (REL). The following equation is used to calculate the HI.

$$HI = C_{air}/REL$$

Where:

- HI = chronic hazard quotient for DPM;
- C_{air} = annual average concentration of DPM ($\mu\text{g}/\text{m}^3$); and
- REL = chronic reference exposure level for DPM ($5 \mu\text{g}/\text{m}^3$).

It should be noted that no acute hazard index was calculated for project-related DPM, as no acute reference exposure level is established for diesel particulate matter.

Non-cancer chronic hazard index calculation worksheets are provided in **Appendix D**.



Legend

- ▬ = Construction Emissions Area Source
- ▬ = Study Area Boundary

= Roadway Emissions Source Locations

Exhibit D

Construction Emissions Source Locations
3rd Trimester Exposure Scenario

TOLL BROTHERS LAGUNA HILLS TOWNHOME PROJECT // CITY OF LAGUNA HILLS
3075-2025-69



Legend

-  = Construction Emissions Area Source
-  = Study Area Boundary

Exhibit E

Construction Emissions Source Locations
Infant Exposure Scenario

TOLL BROTHERS LAGUNA HILLS TOWNHOME PROJECT // CITY OF LAGUNA HILLS
3075-2025-69



Legend

- ▭ = Project Site Boundary
- = Study Area Boundary

▲ = Receptor Location

Exhibit F
Modeled Receptor Locations

5.0 Significance Thresholds

The SCAQMD has established thresholds for the purpose of determining whether pollutant emissions may have a significant effect on the environment per Section 15002(g) of the Guidelines for implementing CEQA. For TACs, the SCAQMD has established thresholds in terms of the maximum individual cancer risk (MICR) and the non-cancer hazard index (HI).

Table 5-1 lists the MICR and HI significance thresholds for the TACs analyzed in this report. These thresholds are applicable to the project’s potential incremental contribution to health risk and do not apply to existing ambient background risk levels.

Table 5-1 | SCAQMD Health Risk Assessment Significance Thresholds¹

Category	Risk Threshold
Maximum Incremental Cancer Risk	≥ 10 in one million
Cancer Burden	> 0.5 excess cancer cases (in areas ≥ 1 in one million)
Chronic & Acute Hazard Index	≥ 1 (project increment)

¹ Source: SCAQMD Air Quality Significance Thresholds. <https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25>.

6.0 Health Risk Assessment Results

6.1 Unmitigated Health Risk Assessment Results

Table 6-1 shows the project’s construction health risk results at each of the modeled sensitive receptor locations. The cancer health risks shown in **Table 6-1** represent the total cumulative risk, which is calculated by summing across all age-specific exposure periods. The hazard indices are reported as the highest hazard index from any single exposure period at each receptor.

The cancer and non-cancer health risk calculation worksheets for the project are provided in **Appendix D. Exhibits G and H** show the emissions concentrations contour maps for the Third Trimester and Infant exposure scenarios, respectively.

As shown in **Table 6-1** below, the maximum construction cancer health risk and non-cancer hazard index are approximately 2.6625 and 0.0039, respectively.

As a result, DPM emissions associated with project construction are not expected to result in cancer or non-cancer health risks that exceed the applicable thresholds of significance established by the SCAQMD.

Table 6-1 | Unmitigated Construction Health Risk Levels

Sensitive Receptor	AERMOD Receptor ID	Cancer Risk (per one million)	Hazard Index
1	1	0.3498	0.0006
	2	0.3308	0.0012
	3	0.8681	0.0039
	4	2.3000	0.0027
	5	2.6625	0.0032
	6	1.3925	0.0017
	7	0.7525	0.0009
	8	0.5747	0.0034
	9	0.3306	0.0021
	10	0.1506	0.0008
	11	0.0972	0.0002
Maximum Risk		2.6625	0.0039
SCAQMD Threshold		10	1
Exceeds Threshold?		No	No

In addition to the above assessment of maximum incremental cancer and non-cancer risk at the adjacent receptors, SCAQMD requires an assessment of cancer burden. Cancer burden is defined as the estimated number of excess cancer cases in the exposed population over a 70-year lifetime. It is calculated by multiplying the maximum incremental cancer risk (expressed per one million) by the estimated exposed population and then dividing by one million, to convert the rate to the expected number of cases.

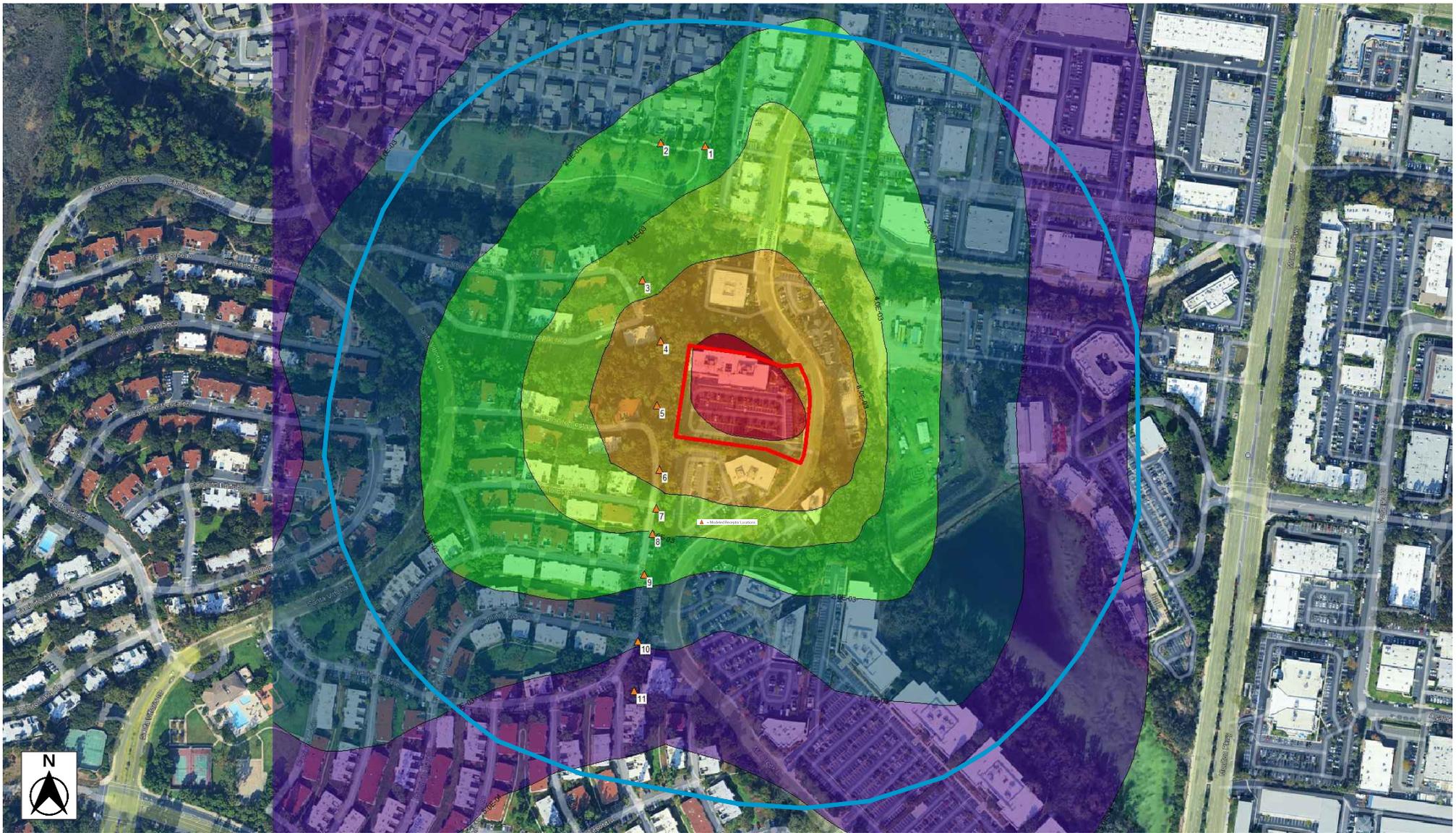
Based on aerial imagery and parcel counts, there are a maximum of approximately 175 households located within the study area. Per the City of Laguna Hills General Plan 2021-2029 Housing Element Update, the City had an average household size of 2.9 persons per household in the 2014-2018 period. Applying the average household size to the estimated 175 households in the study area, the estimated exposed population is approximately 508 residents.

Table 6-2 summarizes the cancer burden calculations for the construction of the project. As shown in the table below, the estimated total cancer burden is well below the SCAQMD significance threshold of 0.5 excess cancer cases under CEQA.

Table 6-2 | Unmitigated Estimated Cancer Burden

Maximum Incremental Cancer Risk (per one million)	Estimated Exposed Population	Estimated Cancer Burden
2.6625	508	0.0014
SCAQMD Cancer Burden Threshold		0.5
Exceeds Threshold?		No

Based on this analysis, the construction of the proposed project is not expected to result in a cancer health risk, non-cancer hazard index, or cancer burden which exceeds the applicable SCAQMD thresholds. **As a result, the project impact from construction-related DPM emissions would be less than significant.**



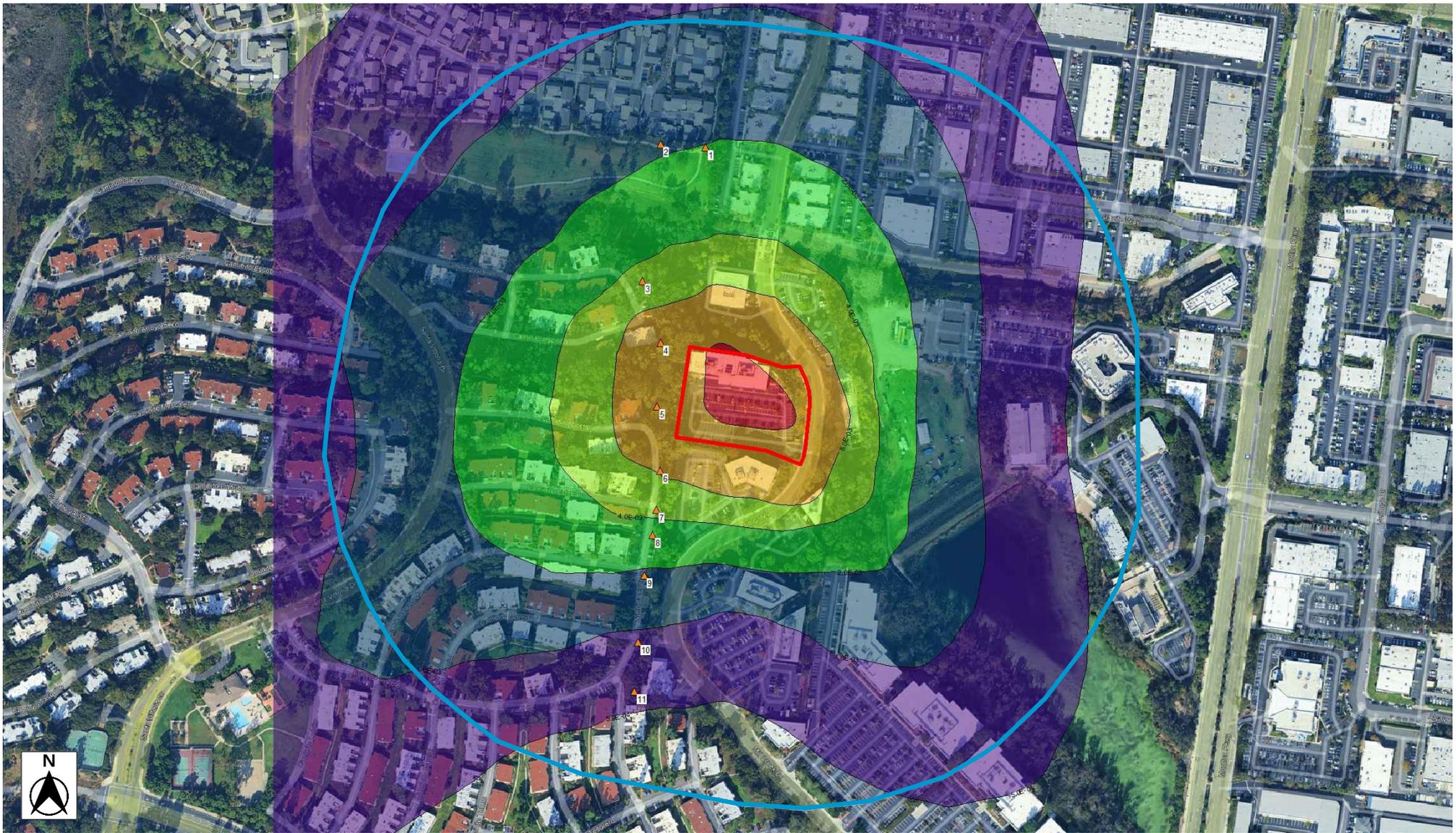
Legend

- = Study Area Boundary
- = 0.0005 - 0.001
- = 0.001 - 0.002
- = 0.002 - 0.004
- = 0.004 - 0.008
- = 0.008 - 0.040
- = 0.040 and above
- ▲ = Modeled Receptor Locations

Exhibit G

Contour Map - Construction Emissions Concentrations ($\mu\text{g}/\text{m}^3$)
Third Trimester Exposure Scenario

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Legend

- = Study Area Boundary
- = 0.0005 - 0.001
- = 0.001 - 0.002
- = 0.002 - 0.004
- = 0.004 - 0.008
- = 0.008 - 0.040
- = 0.040 and above
- ▲ = Modeled Receptor Locations

Exhibit H

Contour Map - Construction Emissions Concentrations ($\mu\text{g}/\text{m}^3$)
 Infant Exposure Scenario

TOLL BROTHERS LAGUNA HILLS TOWNHOME PROJECT // CITY OF LAGUNA HILLS
 3075-2025-69



Appendices



Appendix A

CalEEMod Emissions Outputs

Toll Brothers Laguna Hills Townhomes Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Toll Brothers Laguna Hills Townhomes
Construction Start Date	2/1/2026
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.5
Precipitation (days)	6.0
Location	23161 Mill Creek Dr, Laguna Hills, CA 92653, USA
County	Orange
City	Laguna Hills
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5929
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.35

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
Condo/Townhouse	36	Dwelling Unit	1.5	72,432	30,000	0.00	107	—

Parking Lot	0.92	Acre	0.92	0.00	0.00	0.00	—	—
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-15	Require All-Electric Development

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.34	0.33	3.9	14	0.02	0.04	0.37	0.41	0.04	0.09	0.13	—	2,659	2,659	0.10	0.05	1.5	2,677
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	47	47	63	41	0.36	0.69	16	17	0.69	5.1	5.8	—	52,564	52,564	3.9	7.9	2.6	55,028
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.3	1.3	3.7	9.7	0.02	0.04	0.70	0.74	0.04	0.17	0.21	—	2,731	2,731	0.14	0.19	1.3	2,792
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.24	0.67	1.8	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	452	452	0.02	0.03	0.21	462

2.2. Construction Emissions by Year, Unmitigated

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

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

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.34	0.33	3.9	14	0.02	0.04	0.37	0.41	0.04	0.09	0.13	—	2,659	2,659	0.10	0.05	1.5	2,677
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	5.1	0.97	63	41	0.36	0.69	16	17	0.69	5.1	5.8	—	52,564	52,564	3.9	7.9	2.6	55,028
2027	47	47	3.9	14	0.02	0.04	0.37	0.41	0.04	0.09	0.13	—	2,635	2,635	0.10	0.05	0.03	2,652
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.32	0.23	3.7	9.7	0.02	0.04	0.70	0.74	0.04	0.17	0.21	—	2,731	2,731	0.14	0.19	1.3	2,792
2027	1.3	1.3	0.22	0.78	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	138	138	0.01	< 0.005	0.03	138
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.06	0.04	0.67	1.8	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	452	452	0.02	0.03	0.21	462
2027	0.24	0.24	0.04	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	23	23	< 0.005	< 0.005	< 0.005	23

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.34	0.33	3.9	14	0.02	0.04	0.37	0.41	0.04	0.09	0.13	—	2,659	2,659	0.10	0.05	1.5	2,677
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	5.1	0.97	63	41	0.36	0.69	16	17	0.69	5.1	5.8	—	52,564	52,564	3.9	7.9	2.6	55,028
2027	47	47	3.9	14	0.02	0.04	0.37	0.41	0.04	0.09	0.13	—	2,635	2,635	0.10	0.05	0.03	2,652
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.32	0.23	3.7	9.7	0.02	0.04	0.70	0.74	0.04	0.17	0.21	—	2,731	2,731	0.14	0.19	1.3	2,792

2027	1.3	1.3	0.22	0.78	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	138	138	0.01	< 0.005	0.03	138
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.06	0.04	0.67	1.8	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	452	452	0.02	0.03	0.21	462
2027	0.24	0.24	0.04	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	23	23	< 0.005	< 0.005	< 0.005	23

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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.0	2.8	0.89	11	0.02	0.03	2.1	2.1	0.03	0.52	0.55	17	2,954	2,971	1.8	0.08	8.1	3,050
Mit.	2.9	2.8	0.67	11	0.02	0.01	2.1	2.1	0.01	0.52	0.54	17	2,680	2,697	1.8	0.08	8.1	2,775
% Reduced	1%	< 0.5%	25%	1%	6%	57%	—	1%	59%	—	3%	—	9%	9%	1%	—	—	9%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.8	2.7	0.93	8.0	0.02	0.03	2.1	2.1	0.03	0.52	0.55	17	2,862	2,879	1.8	0.09	0.71	2,952
Mit.	2.7	2.6	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	17	2,587	2,604	1.8	0.09	0.71	2,677
% Reduced	1%	< 0.5%	24%	1%	6%	59%	—	1%	61%	—	3%	—	10%	10%	1%	—	—	9%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.7	2.6	0.84	8.3	0.02	0.03	1.7	1.8	0.03	0.44	0.47	17	2,376	2,392	1.8	0.07	3.3	2,464
Mit.	2.7	2.6	0.62	8.2	0.02	0.01	1.7	1.8	0.01	0.44	0.45	17	2,101	2,118	1.8	0.07	3.3	2,188
% Reduced	1%	< 0.5%	26%	1%	7%	62%	—	1%	64%	—	4%	—	12%	11%	1%	—	—	11%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.50	0.48	0.15	1.5	< 0.005	0.01	0.32	0.32	0.01	0.08	0.09	2.8	393	396	0.30	0.01	0.54	408

Mit.	0.49	0.48	0.11	1.5	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	2.8	348	351	0.30	0.01	0.54	362
% Reduced	1%	< 0.5%	26%	1%	7%	62%	—	1%	64%	—	4%	—	12%	11%	1%	1%	—	11%

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
Area	1.9	1.9	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	213	213	0.01	< 0.005	—	214
Energy	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	569	569	0.04	< 0.005	—	571
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	3.0	2.8	0.89	11	0.02	0.03	2.1	2.1	0.03	0.52	0.55	17	2,954	2,971	1.8	0.08	8.1	3,050
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
Area	1.7	1.7	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Energy	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	569	569	0.04	< 0.005	—	571
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	2.8	2.7	0.93	8.0	0.02	0.03	2.1	2.1	0.03	0.52	0.55	17	2,862	2,879	1.8	0.09	0.71	2,952
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.88	0.81	0.61	6.8	0.02	0.01	1.7	1.8	0.01	0.44	0.45	—	1,771	1,771	0.08	0.07	2.8	1,796

Area	1.8	1.8	0.01	1.4	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	18	18	< 0.005	< 0.005	—	18
Energy	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	569	569	0.04	< 0.005	—	571
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	2.7	2.6	0.84	8.3	0.02	0.03	1.7	1.8	0.03	0.44	0.47	17	2,376	2,392	1.8	0.07	3.3	2,464
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297
Area	0.33	0.33	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.0	3.0	< 0.005	< 0.005	—	3.0
Energy	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	94	94	0.01	< 0.005	—	95
Water	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7
Waste	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	0.50	0.48	0.15	1.5	< 0.005	0.01	0.32	0.32	0.01	0.08	0.09	2.8	393	396	0.30	0.01	0.54	408

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
Area	1.9	1.9	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	213	213	0.01	< 0.005	—	214
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	295	295	0.02	< 0.005	—	296
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	2.9	2.8	0.67	11	0.02	0.01	2.1	2.1	0.01	0.52	0.54	17	2,680	2,697	1.8	0.08	8.1	2,775

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
Area	1.7	1.7	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	295	295	0.02	< 0.005	—	296
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	2.7	2.6	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	17	2,587	2,604	1.8	0.09	0.71	2,677
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.88	0.81	0.61	6.8	0.02	0.01	1.7	1.8	0.01	0.44	0.45	—	1,771	1,771	0.08	0.07	2.8	1,796
Area	1.8	1.8	0.01	1.4	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	18	18	< 0.005	< 0.005	—	18
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	295	295	0.02	< 0.005	—	296
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	2.7	2.6	0.62	8.2	0.02	0.01	1.7	1.8	0.01	0.44	0.45	17	2,101	2,118	1.8	0.07	3.3	2,188
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297
Area	0.33	0.33	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.0	3.0	< 0.005	< 0.005	—	3.0
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	49	49	< 0.005	< 0.005	—	49
Water	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7
Waste	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	0.49	0.48	0.11	1.5	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	2.8	348	351	0.30	0.01	0.54	362

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.39	2.6	15	0.02	0.08	—	0.08	0.08	—	0.08	—	2,494	2,494	0.10	0.02	—	2,503
Demolition	—	—	—	—	—	—	2.8	2.8	—	0.43	0.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.80	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	0.15	0.15	—	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23	23	< 0.005	< 0.005	—	23
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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.57	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	< 0.005	0.01	0.01	157	
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	0.00	
Hauling	0.34	0.05	4.3	1.9	0.02	0.04	0.92	0.97	0.04	0.26	0.30	—	3,489	3,489	0.26	0.55	0.18	3,661	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.6	8.6	< 0.005	< 0.005	0.01	8.7	
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	0.00	
Hauling	0.02	< 0.005	0.24	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	0.01	0.03	0.17	201	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.4	1.4	< 0.005	< 0.005	< 0.005	1.4	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32	32	< 0.005	0.01	0.03	33	

3.2. Demolition (2026) - Mitigated

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

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

Off-Road Equipment	0.42	0.39	2.6	15	0.02	0.08	—	0.08	0.08	—	0.08	—	2,494	2,494	0.10	0.02	—	2,503
Demolition	—	—	—	—	—	—	2.8	2.8	—	0.43	0.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.80	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	0.15	0.15	—	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23	23	< 0.005	< 0.005	—	23
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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.57	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	< 0.005	0.01	0.01	157
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	0.00
Hauling	0.34	0.05	4.3	1.9	0.02	0.04	0.92	0.97	0.04	0.26	0.30	—	3,489	3,489	0.26	0.55	0.18	3,661

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.6	8.6	< 0.005	< 0.005	0.01	8.7
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	0.00
Hauling	0.02	< 0.005	0.24	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	0.01	0.03	0.17	201
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.4	1.4	< 0.005	< 0.005	< 0.005	1.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32	32	< 0.005	0.01	0.03	33

3.3. Site Preparation (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.26	1.3	15	0.03	0.05	—	0.05	0.05	—	0.05	—	2,716	2,716	0.11	0.02	—	2,725
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	< 0.005	< 0.005	0.01	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22	22	< 0.005	< 0.005	—	22
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.7	3.7	< 0.005	< 0.005	—	3.7
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.34	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	93	93	< 0.005	< 0.005	0.01	94
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	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.78
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	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
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	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	0.00

3.4. Site Preparation (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.26	1.3	15	0.03	0.05	—	0.05	0.05	—	0.05	—	2,716	2,716	0.11	0.02	—	2,725
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22	22	< 0.005	< 0.005	—	22
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	3.7	3.7	< 0.005	< 0.005	—	3.7
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.34	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	93	93	< 0.005	< 0.005	0.01	94	
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	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.78	
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	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13	
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	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	0.00	0.00

3.5. Grading (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.23	1.2	14	0.02	0.05	—	0.05	0.05	—	0.05	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	2.9	2.9	—	1.4	1.4	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	40	40	< 0.005	< 0.005	—	40
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.7	6.7	< 0.005	< 0.005	—	6.7
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.45	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	124	124	< 0.005	< 0.005	0.01	125
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	0.00
Hauling	4.8	0.71	62	27	0.34	0.64	13	14	0.64	3.7	4.3	—	49,985	49,985	3.8	7.9	2.6	52,439
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.1	2.1	< 0.005	< 0.005	< 0.005	2.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.08	0.01	1.0	0.44	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	822	822	0.06	0.13	0.72	863
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.35
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	0.00
Hauling	0.01	< 0.005	0.19	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	136	136	0.01	0.02	0.12	143

3.6. Grading (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.23	1.2	14	0.02	0.05	—	0.05	0.05	—	0.05	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	2.9	2.9	—	1.4	1.4	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	40	40	< 0.005	< 0.005	—	40
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.7	6.7	< 0.005	< 0.005	—	6.7

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.45	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	124	124	< 0.005	< 0.005	0.01	125
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	0.00
Hauling	4.8	0.71	62	27	0.34	0.64	13	14	0.64	3.7	4.3	—	49,985	49,985	3.8	7.9	2.6	52,439
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.1	2.1	< 0.005	< 0.005	< 0.005	2.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.08	0.01	1.0	0.44	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	822	822	0.06	0.13	0.72	863
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.35
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	0.00
Hauling	0.01	< 0.005	0.19	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	136	136	0.01	0.02	0.12	143

3.7. Building Construction (2026) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.14	2.1	7.3	0.01	0.02	—	0.02	0.02	—	0.02	—	1,253	1,253	0.05	0.01	—	1,258
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.39	1.3	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	208	208	0.01	< 0.005	—	208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.09	0.08	1.4	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	338	338	< 0.005	0.01	1.2	342
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.31	126
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.09	1.2	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	321	321	< 0.005	0.01	0.03	325
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.01	126
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.70	0.00	0.00	0.19	0.19	0.00	0.05	0.05	—	185	185	< 0.005	0.01	0.29	188
Vendor	0.01	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	69	69	< 0.005	0.01	0.08	72
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	31	31	< 0.005	< 0.005	0.05	31
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11	11	< 0.005	< 0.005	0.01	12
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	0.00

3.8. Building Construction (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.14	2.1	7.3	0.01	0.02	—	0.02	0.02	—	0.02	—	1,253	1,253	0.05	0.01	—	1,258	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.39	1.3	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	208	208	0.01	< 0.005	—	208	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.08	1.4	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	338	338	< 0.005	0.01	1.2	342	
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.31	126	
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	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.09	0.09	1.2	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	321	321	< 0.005	0.01	0.03	325
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.01	126
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.70	0.00	0.00	0.19	0.19	0.00	0.05	0.05	—	185	185	< 0.005	0.01	0.29	188
Vendor	0.01	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	69	69	< 0.005	0.01	0.08	72
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	31	31	< 0.005	< 0.005	0.05	31
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11	11	< 0.005	< 0.005	0.01	12
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	0.00

3.9. Building Construction (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.01	0.01	0.13	0.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	78	78	< 0.005	< 0.005	—	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13	13	< 0.005	< 0.005	—	13
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.07	0.08	1.1	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	316	316	< 0.005	0.01	0.03	320
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	0.01	0.02	0.01	124
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11	11	< 0.005	< 0.005	0.02	11
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.2	4.2	< 0.005	< 0.005	< 0.005	4.4
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.9	1.9	< 0.005	< 0.005	< 0.005	1.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.69	0.69	< 0.005	< 0.005	< 0.005	0.72
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	0.00

3.10. Building Construction (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.13	0.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	78	78	< 0.005	< 0.005	—	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13	13	< 0.005	< 0.005	—	13
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.07	0.08	1.1	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	316	316	< 0.005	0.01	0.03	320
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	0.01	0.02	0.01	124
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11	11	< 0.005	< 0.005	0.02	11
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.2	4.2	< 0.005	< 0.005	< 0.005	4.4
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.9	1.9	< 0.005	< 0.005	< 0.005	1.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.69	0.69	< 0.005	< 0.005	< 0.005	0.72
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	0.00

3.11. Paving (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.18	2.2	8.6	0.01	0.04	—	0.04	0.04	—	0.04	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.24	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	34	34	< 0.005	< 0.005	—	34	
Paving	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	< 0.005	< 0.005	0.01	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.6	5.6	< 0.005	< 0.005	—	5.7	
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.05	0.04	0.05	0.64	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	183	183	< 0.005	0.01	0.02	185	
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	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.1	5.1	< 0.005	< 0.005	0.01	5.1	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	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	0.00	

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.84	0.84	< 0.005	< 0.005	< 0.005	0.85
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	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	0.00

3.12. Paving (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.18	2.2	8.6	0.01	0.04	—	0.04	0.04	—	0.04	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.24	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	34	34	< 0.005	< 0.005	—	34
Paving	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	< 0.005	< 0.005	0.01	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.6	5.6	< 0.005	< 0.005	—	5.7
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.64	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	183	183	< 0.005	0.01	0.02	185
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	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.1	5.1	< 0.005	< 0.005	0.01	5.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.84	0.84	< 0.005	< 0.005	< 0.005	0.85
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	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	0.00

3.13. Architectural Coating (2027) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.1	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	46	46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.7	3.7	< 0.005	< 0.005	—	3.7
Architectural Coatings	1.3	1.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63	63	< 0.005	< 0.005	0.01	64	
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	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.8	1.8	< 0.005	< 0.005	< 0.005	1.8	
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	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.29	
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	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	0.00	

3.14. Architectural Coating (2027) - Mitigated

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

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

Off-Road Equipment	0.14	0.11	0.83	1.1	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	46	46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.7	3.7	< 0.005	< 0.005	—	3.7
Architectural Coatings	1.3	1.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63	63	< 0.005	< 0.005	0.01	64
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	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.8	1.8	< 0.005	< 0.005	< 0.005	1.8
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	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.29
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	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Total	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Condo/T	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/T ownhouse	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/T ownhouse	—	—	—	—	—	—	—	—	—	—	—	—	241	241	0.01	< 0.005	—	242
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	51	51	< 0.005	< 0.005	—	51
Total	—	—	—	—	—	—	—	—	—	—	—	—	292	292	0.02	< 0.005	—	293
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/T ownhouse	—	—	—	—	—	—	—	—	—	—	—	—	241	241	0.01	< 0.005	—	242

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	51	51	< 0.005	< 0.005	—	51
Total	—	—	—	—	—	—	—	—	—	—	—	—	292	292	0.02	< 0.005	—	293
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	40	40	< 0.005	< 0.005	—	40
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	8.5	8.5	< 0.005	< 0.005	—	8.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	48	48	< 0.005	< 0.005	—	49

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	244	244	0.02	< 0.005	—	245	
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	51	51	< 0.005	< 0.005	—	51	
Total	—	—	—	—	—	—	—	—	—	—	—	—	295	295	0.02	< 0.005	—	296	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	244	244	0.02	< 0.005	—	245	
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	51	51	< 0.005	< 0.005	—	51	
Total	—	—	—	—	—	—	—	—	—	—	—	—	295	295	0.02	< 0.005	—	296	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Condo/T	—	—	—	—	—	—	—	—	—	—	—	—	40	40	< 0.005	< 0.005	—	41
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	8.5	8.5	< 0.005	< 0.005	—	8.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	49	49	< 0.005	< 0.005	—	49

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	46	46	< 0.005	< 0.005	—	46
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	46	46	< 0.005	< 0.005	—	46

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Consumer Products	1.6	1.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.19	0.18	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.5	5.5	< 0.005	< 0.005	—	5.5
Total	1.9	1.9	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	213	213	0.01	< 0.005	—	214
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Consumer Products	1.6	1.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.7	1.7	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	2.4	2.4	< 0.005	< 0.005	—	2.4

Consumer Product	0.28	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.62
Total	0.33	0.33	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.0	3.0	< 0.005	< 0.005	—	3.0

4.3.2. Mitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Consumer Products	1.6	1.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.19	0.18	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.5	5.5	< 0.005	< 0.005	—	5.5
Total	1.9	1.9	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	213	213	0.01	< 0.005	—	214
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Consumer Products	1.6	1.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.7	1.7	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	2.4	2.4	< 0.005	< 0.005	—	2.4
Consumer Products	0.28	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.62
Total	0.33	0.33	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.0	3.0	< 0.005	< 0.005	—	3.0

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

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

Condo/T	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7

4.4.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3

4.5.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Condo/T	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09

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

4.7.2. Mitigated

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

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

4.8. 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)

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

4.8.2. Mitigated

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

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

4.9. 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)

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

4.9.2. Mitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

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

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

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	2/1/2026	3/1/2026	5.0	20	—
Site Preparation	Site Preparation	3/2/2026	3/6/2026	5.0	3.0	—
Grading	Grading	3/7/2026	3/15/2026	5.0	6.0	—
Building Construction	Building Construction	3/16/2026	1/18/2027	5.0	220	—
Paving	Paving	1/19/2027	2/2/2027	5.0	10.0	—
Architectural Coating	Architectural Coating	2/3/2027	2/17/2027	5.0	10.0	—

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
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Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.0	33	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.0	367	0.40
Demolition	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	3.0	8.0	84	0.37
Site Preparation	Graders	Diesel	Tier 4 Final	1.00	8.0	148	0.41
Site Preparation	Scrapers	Diesel	Tier 4 Final	1.00	8.0	423	0.48
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	1.00	7.0	84	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.0	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.0	367	0.40
Grading	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	2.0	7.0	84	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	8.0	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	2.0	7.0	82	0.20
Building Construction	Generator Sets	Diesel	Tier 4 Final	1.00	8.0	14	0.74
Building Construction	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	1.00	6.0	84	0.37
Building Construction	Welders	Diesel	Tier 4 Final	3.0	8.0	46	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.0	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Final	1.00	8.0	81	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.0	89	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.0	8.0	36	0.38
Paving	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	1.00	8.0	84	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.0	37	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.0	33	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.0	367	0.40
Demolition	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	3.0	8.0	84	0.37
Site Preparation	Graders	Diesel	Tier 4 Final	1.00	8.0	148	0.41
Site Preparation	Scrapers	Diesel	Tier 4 Final	1.00	8.0	423	0.48
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	1.00	7.0	84	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.0	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.0	367	0.40
Grading	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	2.0	7.0	84	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	8.0	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	2.0	7.0	82	0.20
Building Construction	Generator Sets	Diesel	Tier 4 Final	1.00	8.0	14	0.74
Building Construction	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	1.00	6.0	84	0.37
Building Construction	Welders	Diesel	Tier 4 Final	3.0	8.0	46	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.0	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Final	1.00	8.0	81	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.0	89	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.0	8.0	36	0.38
Paving	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	1.00	8.0	84	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.0	37	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	Worker	13	19	LDA,LDT1,LDT2
Demolition	Vendor	—	10	HHDT,MHDT
Demolition	Hauling	51	20	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	Worker	7.5	19	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10	HHDT,MHDT
Site Preparation	Hauling	0.00	20	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	10.0	19	LDA,LDT1,LDT2
Grading	Vendor	—	10	HHDT,MHDT
Grading	Hauling	729	20	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	26	19	LDA,LDT1,LDT2
Building Construction	Vendor	3.8	10	HHDT,MHDT
Building Construction	Hauling	0.00	20	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15	19	LDA,LDT1,LDT2
Paving	Vendor	—	10	HHDT,MHDT
Paving	Hauling	0.00	20	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	5.2	19	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
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Demolition	Worker	13	19	LDA,LDT1,LDT2
Demolition	Vendor	—	10	HHDT,MHDT
Demolition	Hauling	51	20	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	Worker	7.5	19	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10	HHDT,MHDT
Site Preparation	Hauling	0.00	20	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	10.0	19	LDA,LDT1,LDT2
Grading	Vendor	—	10	HHDT,MHDT
Grading	Hauling	729	20	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	26	19	LDA,LDT1,LDT2
Building Construction	Vendor	3.8	10	HHDT,MHDT
Building Construction	Hauling	0.00	20	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15	19	LDA,LDT1,LDT2
Paving	Vendor	—	10	HHDT,MHDT
Paving	Hauling	0.00	20	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	5.2	19	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

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	146,675	48,892	0.00	0.00	2,405

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	4,072	0.00
Site Preparation	0.00	0.00	4.5	0.00	0.00
Grading	0.00	35,000	6.0	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.92

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
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Paving	Condo/Townhouse	—	0%
Paving	Parking Lot	0.92	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Condo/Townhouse	259	315	258	97,480	2,408	2,930	2,398	905,531
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Condo/Townhouse	259	315	258	97,480	2,408	2,930	2,398	905,531
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Condo/Townhouse	Wood Fireplaces	0	0
Condo/Townhouse	Gas Fireplaces	0	0

Condo/Townhouse	Propane Fireplaces	0	0
Condo/Townhouse	Electric Fireplaces	36	36
Condo/Townhouse	No Fireplaces	0	0
Condo/Townhouse	Conventional Wood Stoves	0	0
Condo/Townhouse	Catalytic Wood Stoves	0	0
Condo/Townhouse	Non-Catalytic Wood Stoves	0	0
Condo/Townhouse	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0
Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0

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)
undefined	146,675	48,892	0.00	0.00	2,405

5.10.3. Landscape Equipment

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

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)
Condo/Townhouse	165,318	532	0.0330	0.0040	865,093
Parking Lot	35,106	532	0.0330	0.0040	0.00

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)
Condo/Townhouse	167,260	532	0.0330	0.0040	0.00
Parking Lot	35,106	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Condo/Townhouse	1,350,923	475,214
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Condo/Townhouse	1,350,923	475,214

Parking Lot	0.00	0.00
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5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Condo/Townhouse	27	0.00
Parking Lot	0.00	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Condo/Townhouse	27	0.00
Parking Lot	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.5	2.5	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.5	2.5	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

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

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

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

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

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Project consists of 36 townhome dwelling units, approximately 40,000 SF of paved surfaces, and approximately 30,000 SF of landscaped area on a site totaling approximately 2.43 acres.
Construction: Off-Road Equipment	Diesel construction equipment will be equipped with Tier 4 low emission "clean diesel" engines (OEM or retrofit) that include diesel oxidation catalysts and diesel particulate filters that meet the latest CARB best available control technology, to the extent feasible.
Operations: Vehicle Data	Trip generation rates are adjusted based on the ITE Trip Generation Manual, 11th Edition.
Operations: Fleet Mix	Fleet mix is adjusted to reflect a total of 2% heavy trucks (GVWR > 10,000 lbs.).
Operations: Hearths	Per SCAQMD Rule 445, no woodburning devices shall be allowed. No gas hookups are proposed for the site.



Appendix B

Emission Factor Calculations

Average Annual Emissions of Construction DPM - Third Trimester Exposure Scenario

Project: Toll Brothers Laguna Hills Townhome Project	Engineer: B. Morrison	Date: 1/6/2026
		JN: 3075-2025-69

Estimated Annual Average Construction DPM Emissions (As PM₁₀ Exhaust)

Total Annual PM10 Exhaust Emissions During Construction ¹ :	0.0036203 tons/year
Average Emissions:	0.0001042 grams/second
Total size of the emission source ² :	9054.4 square meters
Average Area Source Emission:	1.151E-08 grams/m ² -second

¹ Annual PM₁₀ exhaust emissions during construction are estimated based on a weighted average of emissions reported in the CalEEMod model output.

² Source: AERMOD dispersion model outputs.

Average Annual Emissions of Construction DPM - Infant Exposure Scenario

Project: Toll Brothers Laguna Hills Townhome Project	Engineer: B. Morrison	Date: 1/6/2026
		JN: 3075-2025-69

Estimated Annual Average Construction DPM Emissions (As PM₁₀ Exhaust)

Total Annual PM10 Exhaust Emissions During Construction ¹ :	0.0029623 tons/year
Average Emissions:	8.529E-05 grams/second
Total size of the emission source ² :	9054.4 square meters
Average Area Source Emission:	9.42E-09 grams/m ² -second

¹ Annual PM₁₀ exhaust emissions during construction are estimated based on a weighted average of emissions reported in the CalEEMod model output:

² Source: AERMOD dispersion model outputs.

Estimated Roadway DPM Emissions from Truck Hauling Trips

Project: Toll Brothers Laguna Hills Townhome Project	Date: 1/6/2026
Roadway: Mill Creek Drive (north of project driveway)	JN: 3075-2025-69
	Engineer: B. Morrison

Construction Hauling Trips¹

Roadway	Total ADT	LDA/LDT/MDT		Total Trucks		2 Axle		3 Axle		4+ Axle	
		Number	% of Total ADT	Number	% of Total ADT	Number	% of Total Trucks	Number	% of Total Trucks	Number	% of Total Trucks
Mill Creek Dr. North of project	730	0	0.00%	730	100.00%	0	0.00%	0	0.00%	730	100.00%

¹ Project-generated trips are estimated based on Toll Brothers Laguna Hills Townhome Project Air Quality, Greenhouse Gas, and Energy Impact Study, Laguna Hills, California, Appendix A - CalEEMod Emissions Outputs.

Diesel Vehicle Distribution

Truck Type	2 Axle Trucks		3 Axle Trucks	4+ Axle Trucks
EMFAC Category	LHDT1	LHDT2	MHDT	HHDT

Fleet Mix

Vehicle Type	CalEEMod Default Fleet Mix (%)	Adjusted Fleet Mix	Daily Trips
HHDT			
HHDT	100.00	100.00%	730
Total	100.00	100.00%	730
All Vehicles			
Total			730

Diesel Vehicle Distribution

EMFAC Vehicle Class	% Diesel ¹	Daily Diesel Vehicles
HHDT	100.00%	730

¹ For the purposes of a conservative analysis, all project trucks are assumed to run on diesel fuel.

1-Year (2026) Average DPM Emission Factor by Vehicle Speed¹

EMFAC Vehicle Class	Speed (m.p.h.)	Emission Factor (g./mile)
HHDT	25	0.0038

¹ Emission factors are based on EMFAC2025 emissions data in Orange County for year 2026.

Vehicle Emissions Assumptions

$Vehicle\ Emissions = Emission\ Factor\ (g./mi.) \times Mile/Trip \times Trips/Day$	
Length of Roadway Segment:	393.3 meters, or 0.2444375 miles
*Over an annual period, traffic is assumed to be uniformly distributed during the day.	

Project Vehicle Emissions

EMFAC Vehicle Class	Daily Emissions (g./day)	Hourly Emissions (g./sec.)
HHDT	0.6851	7.9294E-06
Total	0.6851	7.9294E-06
	Eastbound	3.9647E-06
	Westbound	3.9647E-06



Appendix C

AERMOD Output Sheets

Third Trimester Exposure Scenario

**

**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 1/7/2026
** File: C:\HRA\30752430_AERMOD\Model_3rd Trimester_Unmit\Model_3rd Trimester_Unmit.ADI
**

**
**

** AERMOD Control Pathway

**
**

CO STARTING
TITLEONE C:\HRA\30752430_AERMOD\Model_3rd Trimester_Unmit\Model_3rd Trimester
MODELOPT DFAULT CONC
AVERTIME PERIOD
URBANOPT 3135755
POLLUTID DPM
RUNORNOT RUN
ERRORFIL "Model_3rd Trimester_Unmit.err"

CO FINISHED
**

** AERMOD Source Pathway

**
**

SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION PAREA1 AREAPOLY 431730.257 3720987.442 87.090
** DESCRSRC Onsite Construction
** -----

** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Hauling Trips
** PREFIX
** Length of Side = 8.59

```

** Configuration = Adjacent
** Emission Rate = 7.9294E-06
** Elevated
** Vertical Dimension = 6.99
** SZINIT = 1.62
** Nodes = 18
** 431837.882, 3720893.381, 89.82, 3.49, 4.00
** 431841.651, 3720931.244, 86.12, 3.49, 4.00
** 431841.830, 3720943.985, 84.86, 3.49, 4.00
** 431838.600, 3720961.571, 82.99, 3.49, 4.00
** 431827.833, 3720982.028, 81.36, 3.49, 4.00
** 431816.729, 3720996.931, 80.12, 3.49, 4.00
** 431807.466, 3721009.876, 79.32, 3.49, 4.00
** 431800.488, 3721022.190, 78.76, 3.49, 4.00
** 431796.384, 3721039.840, 78.54, 3.49, 4.00
** 431796.384, 3721055.027, 78.01, 3.49, 4.00
** 431799.667, 3721080.475, 74.58, 3.49, 4.00
** 431803.362, 3721114.953, 77.94, 3.49, 4.00
** 431808.287, 3721151.894, 78.12, 3.49, 4.00
** 431813.212, 3721166.260, 78.26, 3.49, 4.00
** 431821.422, 3721186.783, 78.52, 3.49, 4.00
** 431840.302, 3721229.059, 78.99, 3.49, 4.00
** 431845.638, 3721245.478, 79.23, 3.49, 4.00
** 431848.512, 3721266.411, 79.43, 3.49, 4.00

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** -----
LOCATION L0000001  VOLUME  431838.308 3720897.655 89.40
LOCATION L0000002  VOLUME  431839.159 3720906.203 88.57
LOCATION L0000003  VOLUME  431840.009 3720914.751 87.73
LOCATION L0000004  VOLUME  431840.860 3720923.298 86.90
LOCATION L0000005  VOLUME  431841.659 3720931.849 86.06
LOCATION L0000006  VOLUME  431841.780 3720940.438 85.21
LOCATION L0000007  VOLUME  431840.919 3720948.945 84.33
LOCATION L0000008  VOLUME  431839.367 3720957.393 83.43
LOCATION L0000009  VOLUME  431836.578 3720965.414 82.68
LOCATION L0000010  VOLUME  431832.577 3720973.015 82.08
LOCATION L0000011  VOLUME  431828.576 3720980.617 81.47
LOCATION L0000012  VOLUME  431823.654 3720987.637 80.89
LOCATION L0000013  VOLUME  431818.521 3720994.526 80.32
LOCATION L0000014  VOLUME  431813.476 3721001.477 79.84
LOCATION L0000015  VOLUME  431808.477 3721008.463 79.41
LOCATION L0000016  VOLUME  431804.088 3721015.838 79.05
LOCATION L0000017  VOLUME  431800.196 3721023.445 78.74
LOCATION L0000018  VOLUME  431798.251 3721031.812 78.64

```

LOCATION L0000019 VOLUME 431796.384 3721040.188 78.53
 LOCATION L0000020 VOLUME 431796.384 3721048.778 78.23
 LOCATION L0000021 VOLUME 431796.683 3721057.349 77.70
 LOCATION L0000022 VOLUME 431797.783 3721065.868 76.55
 LOCATION L0000023 VOLUME 431798.882 3721074.387 75.40
 LOCATION L0000024 VOLUME 431799.929 3721082.913 74.82
 LOCATION L0000025 VOLUME 431800.844 3721091.454 75.65
 LOCATION L0000026 VOLUME 431801.759 3721099.995 76.48
 LOCATION L0000027 VOLUME 431802.674 3721108.536 77.31
 LOCATION L0000028 VOLUME 431803.644 3721117.071 77.95
 LOCATION L0000029 VOLUME 431804.779 3721125.585 77.99
 LOCATION L0000030 VOLUME 431805.914 3721134.100 78.03
 LOCATION L0000031 VOLUME 431807.050 3721142.615 78.07
 LOCATION L0000032 VOLUME 431808.185 3721151.129 78.12
 LOCATION L0000033 VOLUME 431810.823 3721159.290 78.19
 LOCATION L0000034 VOLUME 431813.666 3721167.394 78.27
 LOCATION L0000035 VOLUME 431816.856 3721175.370 78.38
 LOCATION L0000036 VOLUME 431820.047 3721183.346 78.48
 LOCATION L0000037 VOLUME 431823.415 3721191.246 78.57
 LOCATION L0000038 VOLUME 431826.918 3721199.089 78.66
 LOCATION L0000039 VOLUME 431830.421 3721206.933 78.74
 LOCATION L0000040 VOLUME 431833.923 3721214.776 78.83
 LOCATION L0000041 VOLUME 431837.426 3721222.619 78.92
 LOCATION L0000042 VOLUME 431840.777 3721230.521 79.01
 LOCATION L0000043 VOLUME 431843.433 3721238.690 79.13
 LOCATION L0000044 VOLUME 431845.836 3721246.917 79.24
 LOCATION L0000045 VOLUME 431847.004 3721255.428 79.33
 LOCATION L0000046 VOLUME 431848.172 3721263.938 79.41

** End of LINE VOLUME Source ID = SLINE1

** Source Parameters **

SRCPARAM PAREA1 1.1512E-08 3.000 12
 AREAVERT PAREA1 431730.257 3720987.442 431717.767 3720906.824
 AREAVERT PAREA1 431797.817 3720895.091 431828.475 3720882.979
 AREAVERT PAREA1 431831.692 3720889.981 431833.206 3720899.633
 AREAVERT PAREA1 431837.369 3720938.428 431835.855 3720949.025
 AREAVERT PAREA1 431833.206 3720958.866 431827.528 3720970.599
 AREAVERT PAREA1 431812.957 3720969.274 431780.407 3720980.250

** LINE VOLUME Source ID = SLINE1

SRCPARAM L0000001 0.0000001724 3.49 4.00 1.62
 SRCPARAM L0000002 0.0000001724 3.49 4.00 1.62
 SRCPARAM L0000003 0.0000001724 3.49 4.00 1.62
 SRCPARAM L0000004 0.0000001724 3.49 4.00 1.62
 SRCPARAM L0000005 0.0000001724 3.49 4.00 1.62

SRCPARAM L0000006	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000007	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000008	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000009	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000010	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000011	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000012	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000013	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000014	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000015	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000016	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000017	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000018	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000019	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000020	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000021	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000022	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000023	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000024	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000025	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000026	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000027	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000028	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000029	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000030	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000031	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000032	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000033	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000034	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000035	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000036	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000037	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000038	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000039	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000040	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000041	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000042	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000043	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000044	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000045	0.0000001724	3.49	4.00	1.62
SRCPARAM L0000046	0.0000001724	3.49	4.00	1.62

**-----

URBANSRC ALL

SRCGROUP ALL

SO FINISHED

**

** AERMOD Receptor Pathway

**

**

RE STARTING

INCLUDED "Model_3rd Trimester_Unmit.rou"

RE FINISHED

**

** AERMOD Meteorology Pathway

**

**

ME STARTING

SURFFILE "O:\3000-3999\30752430\30752430_HRA\HRA_Air Quality Data\msvj_sfc_pfl (2)\MSVJ_V11_trimmed.sfc"

PROFFILE "O:\3000-3999\30752430\30752430_HRA\HRA_Air Quality Data\msvj_sfc_pfl (2)\MSVJ_V11_trimmed.pfl"

SURFDATA 93184 2017

UAIRDATA 3190 2017

SITEDATA 60592022 2017

PROFBASE 168.0 METERS

ME FINISHED

**

** AERMOD Output Pathway

**

**

OU STARTING

** Auto-Generated Plotfiles

PLOTFILE PERIOD ALL "MODEL_3RD TRIMESTER_UNMIT.AD\PE00GALL.PLT" 31

SUMMFILE "Model_3rd Trimester_Unmit.sum"

OU FINISHED

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)

A Total of 2 Warning Message(s)
A Total of 0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****

ME W186 197 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 197 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

*** SETUP Finishes Successfully ***

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_3rd Trimester_Unmit\Model_3rd Trimester *** 01/07/26

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

- * Model Uses Regulatory DEFAULT Options
- * Model Is Setup For Calculation of Average CONCentration Values.
- * NO GAS DEPOSITION Data Provided.
- * NO PARTICLE DEPOSITION Data Provided.
- * Model Uses NO DRY DEPLETION. DDPLETE = F
- * Model Uses NO WET DEPLETION. WETDPLT = F
- * Stack-tip Downwash.
- * Model Accounts for ELEVated Terrain Effects.
- * Use Calms Processing Routine.
- * Use Missing Data Processing Routine.
- * No Exponential Decay.
- * Model Uses URBAN Dispersion Algorithm for the SBL for 47 Source(s),
for Total of 1 Urban Area(s):
Urban Population = 3135755.0; Urban Roughness Length = 1.000 m
- * Urban Roughness Length of 1.0 Meter Used.
- * ADJ_U* - Use ADJ_U* option for SBL in AERMET
- * CCVR_Sub - Meteorological data includes CCVR substitutions
- * TEMP_Sub - Meteorological data includes TEMP substitutions
- * Model Assumes No FLAGPOLE Receptor Heights.
- * The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes: 47 Source(s); 1 Source Group(s); and 300 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 46 VOLUME source(s)
and: 1 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)
and: 0 SWPOINT source(s)

****Model Set To Continue RUNning After the Setup Testing.**

****The AERMET Input Meteorological Data Version Date: 22112**

****Output Options Selected:**

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

****NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours**

m for Missing Hours

b for Both Calm and Missing Hours

****Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 168.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0**

Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07

Output Units = MICROGRAMS/M**3

****Approximate Storage Requirements of Model = 3.6 MB of RAM.**

****Input Runstream File: aermod.inp**

****Output Print File: aermod.out**

****Detailed Error/Message File: Model_3rd Trimester_Unmit.err**

****File for Summary of Results: Model_3rd Trimester_Unmit.sum**

*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	PART. CATS.	EMISSION RATE (GRAMS/SEC) (METERS)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN EMISSION RATE (METERS)	EMISSION RATE SCALAR	AIRCRAFT VARY BY
L0000001	0	0.17240E-06	431838.3	3720897.7	89.4	3.49	4.00	1.62	YES	NO	
L0000002	0	0.17240E-06	431839.2	3720906.2	88.6	3.49	4.00	1.62	YES	NO	
L0000003	0	0.17240E-06	431840.0	3720914.8	87.7	3.49	4.00	1.62	YES	NO	
L0000004	0	0.17240E-06	431840.9	3720923.3	86.9	3.49	4.00	1.62	YES	NO	
L0000005	0	0.17240E-06	431841.7	3720931.8	86.1	3.49	4.00	1.62	YES	NO	
L0000006	0	0.17240E-06	431841.8	3720940.4	85.2	3.49	4.00	1.62	YES	NO	
L0000007	0	0.17240E-06	431840.9	3720948.9	84.3	3.49	4.00	1.62	YES	NO	
L0000008	0	0.17240E-06	431839.4	3720957.4	83.4	3.49	4.00	1.62	YES	NO	
L0000009	0	0.17240E-06	431836.6	3720965.4	82.7	3.49	4.00	1.62	YES	NO	
L0000010	0	0.17240E-06	431832.6	3720973.0	82.1	3.49	4.00	1.62	YES	NO	
L0000011	0	0.17240E-06	431828.6	3720980.6	81.5	3.49	4.00	1.62	YES	NO	
L0000012	0	0.17240E-06	431823.7	3720987.6	80.9	3.49	4.00	1.62	YES	NO	
L0000013	0	0.17240E-06	431818.5	3720994.5	80.3	3.49	4.00	1.62	YES	NO	
L0000014	0	0.17240E-06	431813.5	3721001.5	79.8	3.49	4.00	1.62	YES	NO	
L0000015	0	0.17240E-06	431808.5	3721008.5	79.4	3.49	4.00	1.62	YES	NO	
L0000016	0	0.17240E-06	431804.1	3721015.8	79.0	3.49	4.00	1.62	YES	NO	
L0000017	0	0.17240E-06	431800.2	3721023.4	78.7	3.49	4.00	1.62	YES	NO	
L0000018	0	0.17240E-06	431798.3	3721031.8	78.6	3.49	4.00	1.62	YES	NO	
L0000019	0	0.17240E-06	431796.4	3721040.2	78.5	3.49	4.00	1.62	YES	NO	
L0000020	0	0.17240E-06	431796.4	3721048.8	78.2	3.49	4.00	1.62	YES	NO	
L0000021	0	0.17240E-06	431796.7	3721057.3	77.7	3.49	4.00	1.62	YES	NO	
L0000022	0	0.17240E-06	431797.8	3721065.9	76.5	3.49	4.00	1.62	YES	NO	
L0000023	0	0.17240E-06	431798.9	3721074.4	75.4	3.49	4.00	1.62	YES	NO	
L0000024	0	0.17240E-06	431799.9	3721082.9	74.8	3.49	4.00	1.62	YES	NO	
L0000025	0	0.17240E-06	431800.8	3721091.5	75.6	3.49	4.00	1.62	YES	NO	
L0000026	0	0.17240E-06	431801.8	3721100.0	76.5	3.49	4.00	1.62	YES	NO	
L0000027	0	0.17240E-06	431802.7	3721108.5	77.3	3.49	4.00	1.62	YES	NO	
L0000028	0	0.17240E-06	431803.6	3721117.1	78.0	3.49	4.00	1.62	YES	NO	
L0000029	0	0.17240E-06	431804.8	3721125.6	78.0	3.49	4.00	1.62	YES	NO	
L0000030	0	0.17240E-06	431805.9	3721134.1	78.0	3.49	4.00	1.62	YES	NO	

L0000031	0	0.17240E-06	431807.0	3721142.6	78.1	3.49	4.00	1.62	YES	NO
L0000032	0	0.17240E-06	431808.2	3721151.1	78.1	3.49	4.00	1.62	YES	NO
L0000033	0	0.17240E-06	431810.8	3721159.3	78.2	3.49	4.00	1.62	YES	NO
L0000034	0	0.17240E-06	431813.7	3721167.4	78.3	3.49	4.00	1.62	YES	NO
L0000035	0	0.17240E-06	431816.9	3721175.4	78.4	3.49	4.00	1.62	YES	NO
L0000036	0	0.17240E-06	431820.0	3721183.3	78.5	3.49	4.00	1.62	YES	NO
L0000037	0	0.17240E-06	431823.4	3721191.2	78.6	3.49	4.00	1.62	YES	NO
L0000038	0	0.17240E-06	431826.9	3721199.1	78.7	3.49	4.00	1.62	YES	NO
L0000039	0	0.17240E-06	431830.4	3721206.9	78.7	3.49	4.00	1.62	YES	NO
L0000040	0	0.17240E-06	431833.9	3721214.8	78.8	3.49	4.00	1.62	YES	NO

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	PART. CATS.	EMISSION RATE (GRAMS/SEC) (METERS)	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN EMISSION RATE (METERS)	EMISSION RATE (METERS)	SCALAR VARY	AIRCRAFT BY
L0000041	0	0.17240E-06	431837.4	3721222.6	78.9	3.49	4.00	1.62	YES			NO
L0000042	0	0.17240E-06	431840.8	3721230.5	79.0	3.49	4.00	1.62	YES			NO
L0000043	0	0.17240E-06	431843.4	3721238.7	79.1	3.49	4.00	1.62	YES			NO
L0000044	0	0.17240E-06	431845.8	3721246.9	79.2	3.49	4.00	1.62	YES			NO
L0000045	0	0.17240E-06	431847.0	3721255.4	79.3	3.49	4.00	1.62	YES			NO
L0000046	0	0.17240E-06	431848.2	3721263.9	79.4	3.49	4.00	1.62	YES			NO

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_3rd Trimester_Unmit\Model_3rd Trimester *** 01/07/26

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*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** AREAPOLY SOURCE DATA ***

SOURCE ID	PART. CATS.	EMISSION RATE /METER**2	LOCATION OF AREA (METERS)	BASE (METERS)	RELEASE NUMBER	INIT. URBAN EMISSION RATE	EMISSION RATE	AIRCRAFT		
			X	Y	HEIGHT OF VERTS. (METERS)	SZ	SOURCE SCALAR VARY	BY		
PAREA1	0	0.11512E-07	431730.3	3720987.4	87.1	3.00	12	0.00	YES	NO

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_3rd Trimester_Unmit\Model_3rd Trimester *** 01/07/26

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID

SOURCE IDs

ALL PAREA1 ,L0000001 ,L0000002 ,L0000003 ,L0000004 ,L0000005 ,L0000006 ,L0000007 ,
L0000008 ,L0000009 ,L0000010 ,L0000011 ,L0000012 ,L0000013 ,L0000014 ,L0000015 ,
L0000016 ,L0000017 ,L0000018 ,L0000019 ,L0000020 ,L0000021 ,L0000022 ,L0000023 ,
L0000024 ,L0000025 ,L0000026 ,L0000027 ,L0000028 ,L0000029 ,L0000030 ,L0000031 ,
L0000032 ,L0000033 ,L0000034 ,L0000035 ,L0000036 ,L0000037 ,L0000038 ,L0000039 ,
L0000040 ,L0000041 ,L0000042 ,L0000043 ,L0000044 ,L0000045 ,L0000046 ,

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID URBAN POP SOURCE IDs

3135755. PAREA1 ,L0000001 ,L0000002 ,L0000003 ,L0000004 ,L0000005 ,L0000006 ,
L0000007 ,

L0000008 ,L0000009 ,L0000010 ,L0000011 ,L0000012 ,L0000013 ,L0000014 ,L0000015 ,

L0000016 ,L0000017 ,L0000018 ,L0000019 ,L0000020 ,L0000021 ,L0000022 ,L0000023 ,

L0000024 ,L0000025 ,L0000026 ,L0000027 ,L0000028 ,L0000029 ,L0000030 ,L0000031 ,

L0000032 ,L0000033 ,L0000034 ,L0000035 ,L0000036 ,L0000037 ,L0000038 ,L0000039 ,

L0000040 ,L0000041 ,L0000042 ,L0000043 ,L0000044 ,L0000045 ,L0000046 ,

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***

(METERS)

431358.3, 431408.3, 431458.3, 431508.3, 431558.3, 431608.3, 431658.3, 431708.3, 431758.3, 431808.3,
431858.3, 431908.3, 431958.3, 432008.3, 432058.3, 432108.3, 432158.3,

*** Y-COORDINATES OF GRID ***

(METERS)

3720532.6, 3720582.6, 3720632.6, 3720682.6, 3720732.6, 3720782.6, 3720832.6, 3720882.6, 3720932.6, 3720982.6,
3721032.6, 3721082.6, 3721132.6, 3721182.6, 3721232.6, 3721282.6, 3721332.6,

*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD	X-COORD (METERS)								
(METERS)	431358.32	431408.32	431458.32	431508.32	431558.32	431608.32	431658.32	431708.32	431758.32

3721332.58	74.30	74.60	74.20	74.40	74.20	74.30	74.60	75.30	75.80
3721282.58	74.00	74.30	74.00	74.40	74.50	74.60	74.70	75.10	75.80
3721232.58	74.20	75.10	74.90	74.60	74.40	74.50	74.80	75.00	75.90
3721182.58	74.00	75.80	76.20	76.00	75.20	75.10	75.20	75.50	76.80
3721132.58	78.40	73.90	74.00	74.90	75.30	75.30	75.70	76.90	78.60
3721082.58	84.60	79.50	80.20	77.20	76.40	76.30	75.20	74.00	73.80
3721032.58	95.00	93.10	85.20	83.30	81.00	81.00	82.00	79.40	79.00
3720982.58	99.40	98.30	96.70	89.80	86.10	85.90	86.80	89.90	90.50
3720932.58	109.70	108.60	107.10	94.80	96.40	95.20	95.20	96.70	92.40
3720882.58	112.90	113.30	109.80	99.00	100.30	100.00	99.90	100.50	99.00
3720832.58	113.10	112.40	109.10	103.00	105.20	105.00	104.80	103.10	99.70
3720782.58	108.40	107.70	105.00	108.20	110.10	110.10	109.60	107.10	108.30
3720732.58	102.90	104.40	109.40	113.40	115.70	115.20	114.50	109.50	110.20
3720682.58	102.90	103.90	109.60	115.30	119.50	120.30	117.10	111.10	110.30
3720632.58	102.80	104.80	109.70	115.60	121.20	121.10	115.40	111.50	108.20
3720582.58	102.30	106.40	111.50	116.80	121.70	121.10	116.20	111.50	107.30
3720532.58	106.40	108.00	113.90	119.20	123.40	123.70	119.70	114.90	108.80

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD	X-COORD (METERS)							
(METERS)	431808.32	431858.32	431908.32	431958.32	432008.32	432058.32	432108.32	432158.32

3721332.58	80.80	80.00	81.10	79.40	79.90	80.30	80.60	80.90
3721282.58	80.10	79.80	79.70	78.60	78.40	79.30	79.30	79.30
3721232.58	80.10	80.20	78.70	78.20	77.90	79.10	79.10	79.00
3721182.58	79.00	79.70	78.50	77.90	77.90	78.60	79.00	79.00
3721132.58	78.00	79.00	77.90	77.60	77.90	78.30	78.30	78.60
3721082.58	75.40	78.20	77.80	77.40	77.60	77.50	77.70	78.30
3721032.58	78.50	76.40	76.40	76.20	75.90	75.60	76.50	75.90
3720982.58	82.40	78.70	78.10	79.30	81.60	80.80	81.40	80.10
3720932.58	91.70	82.50	77.20	78.10	89.10	88.10	83.30	82.70
3720882.58	94.00	86.30	77.90	78.20	87.40	88.00	87.90	87.70
3720832.58	96.20	92.60	79.50	84.40	86.30	87.00	89.70	88.90
3720782.58	101.70	104.90	86.60	86.20	86.20	86.20	88.40	89.70
3720732.58	110.10	105.10	100.30	86.80	86.20	86.20	88.70	88.80
3720682.58	110.30	104.70	105.10	98.60	87.30	86.20	86.30	87.80
3720632.58	108.10	105.60	104.30	104.90	97.70	86.40	86.20	87.50
3720582.58	105.50	105.50	104.20	102.80	103.30	95.80	86.30	86.70
3720532.58	104.00	101.80	101.40	102.00	101.40	100.90	87.80	87.70

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD | X-COORD (METERS)
(METERS) | 431358.32 431408.32 431458.32 431508.32 431558.32 431608.32 431658.32 431708.32 431758.32

3721332.58	74.30	74.60	74.20	74.40	74.20	74.30	74.60	75.30	80.90
3721282.58	115.50	109.90	74.00	74.40	74.50	74.60	74.70	75.10	80.40
3721232.58	115.50	115.50	115.50	115.50	115.50	74.50	74.80	75.00	80.30
3721182.58	159.50	115.50	115.50	115.50	115.50	115.50	115.40	75.50	78.70
3721132.58	115.50	115.50	118.20	118.20	118.20	120.40	117.40	96.40	78.60
3721082.58	115.50	115.50	115.50	123.90	123.90	123.90	123.90	123.90	123.90
3721032.58	115.50	115.50	115.50	123.90	123.90	123.90	123.90	123.90	123.90
3720982.58	115.50	115.50	115.50	118.20	123.90	123.90	123.90	109.30	92.60
3720932.58	109.90	115.50	115.40	118.20	117.40	120.40	114.60	96.70	114.20
3720882.58	115.40	115.50	115.40	118.20	118.20	120.40	117.60	100.50	99.00
3720832.58	115.20	115.40	115.40	123.90	118.20	120.40	117.50	117.30	117.50
3720782.58	115.30	115.40	123.90	120.60	118.20	120.40	117.40	117.30	109.80
3720732.58	115.40	123.90	118.00	118.00	118.10	120.40	116.70	120.10	110.20
3720682.58	102.90	123.90	123.90	123.90	120.60	120.30	117.10	123.90	110.30
3720632.58	102.80	125.90	125.90	123.90	123.90	123.90	123.90	123.90	109.60
3720582.58	125.90	125.90	125.90	125.90	123.50	123.70	126.30	127.10	127.10
3720532.58	119.90	126.00	125.90	125.90	125.90	126.30	126.60	127.10	127.10

*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD | X-COORD (METERS)
(METERS) | 431808.32 431858.32 431908.32 431958.32 432008.32 432058.32 432108.32 432158.32

3721332.58	80.80	80.00	81.10	79.40	79.90	80.30	80.60	80.90
3721282.58	80.10	79.80	79.70	78.60	78.40	79.30	79.30	79.30
3721232.58	80.10	80.20	79.40	78.20	77.90	79.10	79.10	79.00
3721182.58	79.00	79.70	78.50	77.90	77.90	78.60	79.00	79.00
3721132.58	78.00	79.00	77.90	77.60	77.90	78.30	78.30	78.60
3721082.58	120.40	92.50	77.80	77.40	77.60	77.50	77.70	78.30
3721032.58	123.90	123.90	110.40	110.40	110.40	90.00	90.00	78.70
3720982.58	123.90	123.90	120.10	110.40	109.90	90.00	89.90	87.60
3720932.58	110.40	123.90	123.90	117.90	90.00	89.90	89.90	88.20
3720882.58	110.60	123.90	126.30	123.90	110.40	88.00	87.90	87.70
3720832.58	117.50	117.30	127.10	115.60	110.40	88.50	89.70	88.90
3720782.58	110.40	110.40	123.90	110.90	110.90	110.40	89.70	89.90
3720732.58	110.10	110.40	110.40	116.40	110.90	110.40	88.70	88.80
3720682.58	110.30	110.90	105.10	105.30	110.90	110.60	104.90	87.80
3720632.58	110.90	110.80	104.30	104.90	104.90	110.60	104.90	103.40
3720582.58	105.50	105.50	104.20	102.80	103.30	103.40	104.90	103.40
3720532.58	127.10	127.10	101.40	102.00	103.10	100.90	104.50	103.40

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_3rd Trimester_Unmit\Model_3rd Trimester *** 01/07/26

*** AERMET - VERSION 22112 *** ** *** 08:23:14

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(431744.4, 3721165.3, 75.8, 78.5, 0.0); (431704.3, 3721167.9, 75.8, 77.6, 0.0);
(431688.2, 3721046.3, 79.9, 123.9, 0.0); (431704.3, 3720991.5, 87.8, 120.4, 0.0);
(431701.0, 3720934.7, 96.7, 96.7, 0.0); (431703.6, 3720877.2, 100.9, 100.9, 0.0);
(431700.3, 3720842.4, 103.8, 103.8, 0.0); (431696.9, 3720819.7, 105.5, 114.0, 0.0);
(431689.6, 3720783.6, 109.1, 109.1, 0.0); (431684.2, 3720724.8, 113.9, 113.9, 0.0);
(431680.9, 3720680.7, 114.2, 121.0, 0.0);

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_3rd Trimester_Unmit\Model_3rd Trimester *** 01/07/26

*** AERMET - VERSION 22112 *** ** *** 08:23:14

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*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE	-- RECEPTOR LOCATION --		DISTANCE
ID	XR (METERS)	YR (METERS)	(METERS)
L0000024	431808.3	3721082.6	-0.20
L0000029	431808.3	3721132.6	-0.76
L0000030	431808.3	3721132.6	-5.75

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_3rd Trimester_Unmit\Model_3rd Trimester *** 01/07/26

*** AERMET - VERSION 22112 *** ** *** 08:23:14

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: O:\3000-3999\30752430\30752430_HRA\HRA_Air Quality Data\msvj_sfc_pfl (2)\MSVJ_V1 Met Version: 22112

Profile file: O:\3000-3999\30752430\30752430_HRA\HRA_Air Quality Data\msvj_sfc_pfl (2)\MSVJ_V1

Surface format: FREE

Profile format: FREE

Surface station no.: 93184

Upper air station no.: 3190

Name: UNKNOWN

Name: UNKNOWN

Year: 2017

Year: 2017

First 24 hours of scalar data

YR MO DY JDY HR H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN ZO BOWEN ALBEDO REF WS WD HT REF TA HT

17	01	01	1	01	-3.5	0.085	-9.000	-9.000	-999.	59.	15.7	0.20	1.20	1.00	0.86	69.	10.0	280.0	9.0
17	01	01	1	02	-3.7	0.087	-9.000	-9.000	-999.	62.	15.9	0.20	1.20	1.00	0.90	61.	10.0	279.7	9.0
17	01	01	1	03	-8.0	0.126	-9.000	-9.000	-999.	107.	22.3	0.20	1.20	1.00	1.34	69.	10.0	280.4	9.0
17	01	01	1	04	-3.1	0.081	-9.000	-9.000	-999.	56.	15.5	0.20	1.20	1.00	0.80	67.	10.0	279.9	9.0
17	01	01	1	05	-3.0	0.080	-9.000	-9.000	-999.	54.	14.8	0.15	1.20	1.00	0.86	113.	10.0	279.8	9.0
17	01	01	1	06	-6.1	0.109	-9.000	-9.000	-999.	86.	18.7	0.15	1.20	1.00	1.26	92.	10.0	279.9	9.0
17	01	01	1	07	-5.8	0.107	-9.000	-9.000	-999.	84.	18.8	0.20	1.20	1.00	1.14	86.	10.0	279.8	9.0
17	01	01	1	08	-3.2	0.087	-9.000	-9.000	-999.	61.	18.2	0.15	1.20	0.53	1.00	98.	10.0	280.2	9.0
17	01	01	1	09	36.6	0.148	0.553	0.005	163.	136.	-7.8	0.15	1.20	0.31	1.12	106.	10.0	283.2	9.0
17	01	01	1	10	89.0	0.203	1.161	0.005	624.	219.	-8.3	0.19	1.20	0.24	1.45	159.	10.0	285.0	9.0
17	01	01	1	11	102.2	0.298	1.444	0.005	1044.	390.	-22.9	0.25	1.20	0.21	2.23	183.	10.0	285.5	9.0
17	01	01	1	12	116.1	0.262	1.560	0.005	1160.	323.	-13.7	0.25	1.20	0.20	1.83	200.	10.0	286.2	9.0
17	01	01	1	13	114.8	0.302	1.599	0.005	1265.	399.	-21.4	0.17	1.20	0.20	2.51	225.	10.0	286.6	9.0
17	01	01	1	14	98.2	0.415	1.544	0.005	1330.	641.	-64.5	0.25	1.20	0.21	3.44	205.	10.0	286.5	9.0
17	01	01	1	15	79.0	0.324	1.451	0.005	1370.	448.	-38.2	0.25	1.20	0.25	2.57	199.	10.0	286.4	9.0
17	01	01	1	16	26.2	0.313	1.007	0.005	1383.	420.	-103.7	0.25	1.20	0.33	2.68	195.	10.0	286.5	9.0
17	01	01	1	17	-20.5	0.246	-9.000	-9.000	-999.	295.	66.8	0.25	1.20	0.61	2.33	190.	10.0	285.5	9.0
17	01	01	1	18	-7.1	0.119	-9.000	-9.000	-999.	109.	21.0	0.19	1.20	1.00	1.29	162.	10.0	284.2	9.0
17	01	01	1	19	-6.0	0.108	-9.000	-9.000	-999.	86.	18.7	0.15	1.20	1.00	1.25	117.	10.0	283.5	9.0
17	01	01	1	20	-8.2	0.127	-9.000	-9.000	-999.	108.	22.1	0.15	1.20	1.00	1.46	104.	10.0	283.4	9.0
17	01	01	1	21	-8.0	0.125	-9.000	-9.000	-999.	106.	21.8	0.15	1.20	1.00	1.44	120.	10.0	284.0	9.0
17	01	01	1	22	-7.3	0.120	-9.000	-9.000	-999.	100.	21.1	0.17	1.20	1.00	1.34	127.	10.0	284.3	9.0
17	01	01	1	23	-5.7	0.106	-9.000	-9.000	-999.	83.	18.6	0.17	1.20	1.00	1.19	128.	10.0	284.0	9.0
17	01	01	1	24	-9.5	0.137	-9.000	-9.000	-999.	122.	24.2	0.17	1.20	1.00	1.52	129.	10.0	283.9	9.0

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV

17 01 01 01 9.0 0 -999. -99.00 280.0 99.0 -99.00 -99.00

17 01 01 01 10.0 1 69. 0.86 -999.0 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43824 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 ,L0000001 ,L0000002 ,L0000003 ,L0000004 ,
L0000005 ,L0000006 ,L0000007 ,L0000008 ,L0000009 ,L0000010 ,L0000011 ,L0000012 ,
L0000013 ,L0000014 ,L0000015 ,L0000016 ,L0000017 ,L0000018 ,L0000019 ,L0000020 ,
L0000021 ,L0000022 ,L0000023 ,L0000024 ,L0000025 ,L0000026 ,L0000027 , ... ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD | X-COORD (METERS)
(METERS)| 431358.32 431408.32 431458.32 431508.32 431558.32 431608.32 431658.32 431708.32 431758.32

3721332.58	0.00051	0.00057	0.00064	0.00072	0.00082	0.00092	0.00103	0.00112	0.00119
3721282.58	0.00056	0.00063	0.00072	0.00083	0.00095	0.00110	0.00125	0.00140	0.00154
3721232.58	0.00062	0.00071	0.00082	0.00095	0.00112	0.00133	0.00156	0.00180	0.00207
3721182.58	0.00069	0.00080	0.00094	0.00111	0.00134	0.00163	0.00199	0.00238	0.00287
3721132.58	0.00078	0.00090	0.00107	0.00130	0.00161	0.00203	0.00260	0.00331	0.00415
3721082.58	0.00087	0.00103	0.00126	0.00155	0.00196	0.00259	0.00351	0.00473	0.00603
3721032.58	0.00093	0.00114	0.00145	0.00186	0.00247	0.00349	0.00539	0.00854	0.01206
3720982.58	0.00098	0.00121	0.00155	0.00215	0.00302	0.00462	0.00832	0.02145	0.05941
3720932.58	0.00091	0.00113	0.00145	0.00230	0.00322	0.00514	0.00958	0.02327	0.06134
3720882.58	0.00090	0.00108	0.00146	0.00234	0.00323	0.00486	0.00779	0.01170	0.01620
3720832.58	0.00094	0.00115	0.00154	0.00224	0.00284	0.00375	0.00458	0.00491	0.00524
3720782.58	0.00105	0.00129	0.00165	0.00192	0.00220	0.00244	0.00239	0.00216	0.00173
3720732.58	0.00111	0.00130	0.00143	0.00149	0.00150	0.00145	0.00125	0.00114	0.00098
3720682.58	0.00106	0.00120	0.00123	0.00114	0.00100	0.00086	0.00074	0.00071	0.00067
3720632.58	0.00096	0.00103	0.00100	0.00086	0.00068	0.00058	0.00054	0.00050	0.00053
3720582.58	0.00084	0.00084	0.00076	0.00063	0.00049	0.00042	0.00039	0.00038	0.00042
3720532.58	0.00069	0.00066	0.00057	0.00045	0.00036	0.00030	0.00028	0.00028	0.00033

*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43824 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 ,L0000001 ,L0000002 ,L0000003 ,L0000004 ,
L0000005 ,L0000006 ,L0000007 ,L0000008 ,L0000009 ,L0000010 ,L0000011 ,L0000012 ,
L0000013 ,L0000014 ,L0000015 ,L0000016 ,L0000017 ,L0000018 ,L0000019 ,L0000020 ,
L0000021 ,L0000022 ,L0000023 ,L0000024 ,L0000025 ,L0000026 ,L0000027 , ... ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD | X-COORD (METERS)
(METERS)| 431808.32 431858.32 431908.32 431958.32 432008.32 432058.32 432108.32 432158.32

Y-COORD (METERS)	X-COORD (METERS) 431808.32	X-COORD (METERS) 431858.32	X-COORD (METERS) 431908.32	X-COORD (METERS) 431958.32	X-COORD (METERS) 432008.32	X-COORD (METERS) 432058.32	X-COORD (METERS) 432108.32	X-COORD (METERS) 432158.32
3721332.58	0.00124	0.00120	0.00105	0.00087	0.00072	0.00059	0.00049	0.00041
3721282.58	0.00177	0.00199	0.00134	0.00103	0.00082	0.00065	0.00053	0.00043
3721232.58	0.00281	0.00342	0.00167	0.00121	0.00092	0.00072	0.00056	0.00045
3721182.58	0.00511	0.00308	0.00198	0.00141	0.00103	0.00077	0.00059	0.00046
3721132.58	0.00557	0.00350	0.00235	0.00161	0.00113	0.00081	0.00061	0.00047
3721082.58	0.00747	0.00456	0.00285	0.00180	0.00119	0.00082	0.00060	0.00046
3721032.58	0.01274	0.00640	0.00335	0.00189	0.00118	0.00080	0.00058	0.00044
3720982.58	0.03181	0.01026	0.00373	0.00190	0.00115	0.00077	0.00056	0.00042
3720932.58	0.06774	0.01421	0.00362	0.00179	0.00109	0.00073	0.00053	0.00040
3720882.58	0.02209	0.01047	0.00350	0.00180	0.00111	0.00074	0.00053	0.00040
3720832.58	0.00569	0.00518	0.00303	0.00184	0.00115	0.00077	0.00055	0.00041
3720782.58	0.00232	0.00228	0.00234	0.00164	0.00113	0.00079	0.00057	0.00043
3720732.58	0.00109	0.00146	0.00160	0.00136	0.00104	0.00078	0.00058	0.00045
3720682.58	0.00074	0.00101	0.00106	0.00109	0.00091	0.00072	0.00057	0.00045
3720632.58	0.00058	0.00071	0.00080	0.00080	0.00078	0.00065	0.00054	0.00044
3720582.58	0.00047	0.00054	0.00061	0.00065	0.00063	0.00059	0.00050	0.00042
3720532.58	0.00039	0.00045	0.00050	0.00053	0.00053	0.00050	0.00045	0.00039

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_3rd Trimester_Unmit\Model_3rd Trimester *** 01/07/26

*** AERMET - VERSION 22112 *** ** 08:23:14

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*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43824 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 ,L0000001 ,L0000002 ,L0000003 ,L0000004 ,
L0000005 ,L0000006 ,L0000007 ,L0000008 ,L0000009 ,L0000010 ,L0000011 ,L0000012 ,
L0000013 ,L0000014 ,L0000015 ,L0000016 ,L0000017 ,L0000018 ,L0000019 ,L0000020 ,
L0000021 ,L0000022 ,L0000023 ,L0000024 ,L0000025 ,L0000026 ,L0000027 ,... ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
431744.40	3721165.27	0.00302	431704.29	3721167.94	0.00257
431688.25	3721046.30	0.00614	431704.29	3720991.49	0.01697
431700.95	3720934.68	0.01961	431703.63	3720877.19	0.01031
431700.28	3720842.44	0.00554	431696.94	3720819.71	0.00385
431689.59	3720783.62	0.00222	431684.24	3720724.80	0.00104
431680.90	3720680.69	0.00071			

*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

NETWORK

GROUP ID AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID

ALL 1ST HIGHEST VALUE IS 0.06774 AT (431808.32, 3720932.58, 91.70, 110.40, 0.00) GC UCART1
2ND HIGHEST VALUE IS 0.06134 AT (431758.32, 3720932.58, 92.40, 114.20, 0.00) GC UCART1
3RD HIGHEST VALUE IS 0.05941 AT (431758.32, 3720982.58, 90.50, 92.60, 0.00) GC UCART1
4TH HIGHEST VALUE IS 0.03181 AT (431808.32, 3720982.58, 82.40, 123.90, 0.00) GC UCART1
5TH HIGHEST VALUE IS 0.02327 AT (431708.32, 3720932.58, 96.70, 96.70, 0.00) GC UCART1
6TH HIGHEST VALUE IS 0.02209 AT (431808.32, 3720882.58, 94.00, 110.60, 0.00) GC UCART1
7TH HIGHEST VALUE IS 0.02145 AT (431708.32, 3720982.58, 89.90, 109.30, 0.00) GC UCART1
8TH HIGHEST VALUE IS 0.01961 AT (431700.95, 3720934.68, 96.71, 96.71, 0.00) DC
9TH HIGHEST VALUE IS 0.01697 AT (431704.29, 3720991.49, 87.82, 120.37, 0.00) DC
10TH HIGHEST VALUE IS 0.01620 AT (431758.32, 3720882.58, 99.00, 99.00, 0.00) GC UCART1

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_3rd Trimester_Unmit\Model_3rd Trimester *** 01/07/26

*** AERMET - VERSION 22112 *** ** *** 08:23:14

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)

A Total of 2 Warning Message(s)

A Total of 471 Informational Message(s)

A Total of 43824 Hours Were Processed

A Total of 92 Calm Hours Identified

A Total of 379 Missing Hours Identified (0.86 Percent)

***** FATAL ERROR MESSAGES *****

*** NONE ***

***** WARNING MESSAGES *****

ME W186 197 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

ME W187 197 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

*** AERMOD Finishes Successfully ***

Infant Exposure Scenario

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**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 1/6/2026
** File: C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc
  MODELOPT DFAULT CONC
  AVERTIME PERIOD
  URBANOPT 3135755
  POLLUTID DPM
  RUNORNOT RUN
  ERRORFIL Model_infant_Unmit.err
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION PAREA1  AREAPOLY 431730.257 3720987.442 87.090
** DESCRSRC Onsite Construction
** Source Parameters **
  SRCPARAM PAREA1 9.42E-09 3.000 12
  AREAVERT PAREA1 431730.257 3720987.442 431717.767 3720906.824
  AREAVERT PAREA1 431797.817 3720895.091 431828.475 3720882.979
  AREAVERT PAREA1 431831.692 3720889.981 431833.206 3720899.633
  AREAVERT PAREA1 431837.369 3720938.428 431835.855 3720949.025

```

AREAVERT PAREA1 431833.206 3720958.866 431827.528 3720970.599
AREAVERT PAREA1 431812.957 3720969.274 431780.407 3720980.250

URBANSRC ALL
SRCGROUP ALL

SO FINISHED

**

** AERMOD Receptor Pathway

**

**

RE STARTING

INCLUDED Model_infant_Unmit.rou

RE FINISHED

**

** AERMOD Meteorology Pathway

**

**

ME STARTING

SURFFILE "O:\3000-3999\30752430\30752430_HRA\HRA_Air Quality Data\msvj_sfc_pfl (2)\MSVJ_V11_trimmed.sfc"

PROFFILE "O:\3000-3999\30752430\30752430_HRA\HRA_Air Quality Data\msvj_sfc_pfl (2)\MSVJ_V11_trimmed.pfl"

SURFDATA 93184 2017

UAIRDATA 3190 2017

SITEDATA 60592022 2017

PROFBASE 168.0 METERS

ME FINISHED

**

** AERMOD Output Pathway

**

**

OU STARTING

** Auto-Generated Plotfiles

PLOTFILE PERIOD ALL MODEL_INFANT_UNMIT.AD\PE00GALL.PLT 31

SUMMFILE Model_infant_Unmit.sum

OU FINISHED

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 2 Warning Message(s)
A Total of 0 Informational Message(s)

***** FATAL ERROR MESSAGES *****

*** NONE ***

***** WARNING MESSAGES *****

ME W186 71 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 71 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

*** SETUP Finishes Successfully ***

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

*** AERMET - VERSION 22112 *** ** *** 15:48:45

PAGE 1

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

- * Model Uses Regulatory DEFAULT Options
- * Model Is Setup For Calculation of Average CONCentration Values.
- * NO GAS DEPOSITION Data Provided.
- * NO PARTICLE DEPOSITION Data Provided.
- * Model Uses NO DRY DEPLETION. DDPLETE = F
- * Model Uses NO WET DEPLETION. WETDPLT = F
- * Stack-tip Downwash.
- * Model Accounts for ELEVated Terrain Effects.
- * Use Calms Processing Routine.
- * Use Missing Data Processing Routine.
- * No Exponential Decay.
- * Model Uses URBAN Dispersion Algorithm for the SBL for 1 Source(s),
for Total of 1 Urban Area(s):
Urban Population = 3135755.0; Urban Roughness Length = 1.000 m
- * Urban Roughness Length of 1.0 Meter Used.
- * ADJ_U* - Use ADJ_U* option for SBL in AERMET
- * CCVR_Sub - Meteorological data includes CCVR substitutions
- * TEMP_Sub - Meteorological data includes TEMP substitutions
- * Model Assumes No FLAGPOLE Receptor Heights.
- * The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes: 1 Source(s); 1 Source Group(s); and 300 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 1 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)
and: 0 SWPOINT source(s)

**Model Set To Continue RUNNING After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 22112

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours

m for Missing Hours

b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 168.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0

Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07

Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.5 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

**Detailed Error/Message File: Model_infant_Unmit.err

**File for Summary of Results: Model_infant_Unmit.sum

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** AREAPOLY SOURCE DATA ***

SOURCE ID	PART. CATS.	EMISSION RATE /METER**2	LOCATION OF AREA (METERS)	BASE (METERS)	RELEASE NUMBER	INIT.	URBAN EMISSION RATE	AIRCRAFT		
			X	Y	HEIGHT OF VERTS. (METERS)	SZ	SCALAR VARY	BY		
PAREA1	0	0.94200E-08	431730.3	3720987.4	87.1	3.00	12	0.00	YES	NO

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID

SOURCE IDs

ALL PAREA1 ,

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
-----	-----	-----

3135755.	PAREA1	,
----------	--------	---

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

*** AERMET - VERSION 22112 *** ** *** 15:48:45

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***

(METERS)

431358.3, 431408.3, 431458.3, 431508.3, 431558.3, 431608.3, 431658.3, 431708.3, 431758.3, 431808.3,
431858.3, 431908.3, 431958.3, 432008.3, 432058.3, 432108.3, 432158.3,

*** Y-COORDINATES OF GRID ***

(METERS)

3720532.6, 3720582.6, 3720632.6, 3720682.6, 3720732.6, 3720782.6, 3720832.6, 3720882.6, 3720932.6, 3720982.6,
3721032.6, 3721082.6, 3721132.6, 3721182.6, 3721232.6, 3721282.6, 3721332.6,

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

*** AERMET - VERSION 22112 *** ** *** 15:48:45

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD	X-COORD (METERS)								
(METERS)	431358.32	431408.32	431458.32	431508.32	431558.32	431608.32	431658.32	431708.32	431758.32

3721332.58	74.30	74.60	74.20	74.40	74.20	74.30	74.60	75.30	75.80
3721282.58	74.00	74.30	74.00	74.40	74.50	74.60	74.70	75.10	75.80
3721232.58	74.20	75.10	74.90	74.60	74.40	74.50	74.80	75.00	75.90
3721182.58	74.00	75.80	76.20	76.00	75.20	75.10	75.20	75.50	76.80
3721132.58	78.40	73.90	74.00	74.90	75.30	75.30	75.70	76.90	78.60
3721082.58	84.60	79.50	80.20	77.20	76.40	76.30	75.20	74.00	73.80
3721032.58	95.00	93.10	85.20	83.30	81.00	81.00	82.00	79.40	79.00
3720982.58	99.40	98.30	96.70	89.80	86.10	85.90	86.80	89.90	90.50
3720932.58	109.70	108.60	107.10	94.80	96.40	95.20	95.20	96.70	92.40
3720882.58	112.90	113.30	109.80	99.00	100.30	100.00	99.90	100.50	99.00
3720832.58	113.10	112.40	109.10	103.00	105.20	105.00	104.80	103.10	99.70
3720782.58	108.40	107.70	105.00	108.20	110.10	110.10	109.60	107.10	108.30
3720732.58	102.90	104.40	109.40	113.40	115.70	115.20	114.50	109.50	110.20
3720682.58	102.90	103.90	109.60	115.30	119.50	120.30	117.10	111.10	110.30
3720632.58	102.80	104.80	109.70	115.60	121.20	121.10	115.40	111.50	108.20
3720582.58	102.30	106.40	111.50	116.80	121.70	121.10	116.20	111.50	107.30
3720532.58	106.40	108.00	113.90	119.20	123.40	123.70	119.70	114.90	108.80

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD	X-COORD (METERS)							
(METERS)	431808.32	431858.32	431908.32	431958.32	432008.32	432058.32	432108.32	432158.32

3721332.58	80.80	80.00	81.10	79.40	79.90	80.30	80.60	80.90
3721282.58	80.10	79.80	79.70	78.60	78.40	79.30	79.30	79.30
3721232.58	80.10	80.20	78.70	78.20	77.90	79.10	79.10	79.00
3721182.58	79.00	79.70	78.50	77.90	77.90	78.60	79.00	79.00
3721132.58	78.00	79.00	77.90	77.60	77.90	78.30	78.30	78.60
3721082.58	75.40	78.20	77.80	77.40	77.60	77.50	77.70	78.30
3721032.58	78.50	76.40	76.40	76.20	75.90	75.60	76.50	75.90
3720982.58	82.40	78.70	78.10	79.30	81.60	80.80	81.40	80.10
3720932.58	91.70	82.50	77.20	78.10	89.10	88.10	83.30	82.70
3720882.58	94.00	86.30	77.90	78.20	87.40	88.00	87.90	87.70
3720832.58	96.20	92.60	79.50	84.40	86.30	87.00	89.70	88.90
3720782.58	101.70	104.90	86.60	86.20	86.20	86.20	88.40	89.70
3720732.58	110.10	105.10	100.30	86.80	86.20	86.20	88.70	88.80
3720682.58	110.30	104.70	105.10	98.60	87.30	86.20	86.30	87.80
3720632.58	108.10	105.60	104.30	104.90	97.70	86.40	86.20	87.50
3720582.58	105.50	105.50	104.20	102.80	103.30	95.80	86.30	86.70
3720532.58	104.00	101.80	101.40	102.00	101.40	100.90	87.80	87.70

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD	X-COORD (METERS)								
(METERS)	431358.32	431408.32	431458.32	431508.32	431558.32	431608.32	431658.32	431708.32	431758.32

3721332.58	74.30	74.60	74.20	74.40	74.20	74.30	74.60	75.30	80.90
3721282.58	115.50	109.90	74.00	74.40	74.50	74.60	74.70	75.10	80.40
3721232.58	115.50	115.50	115.50	115.50	115.50	74.50	74.80	75.00	80.30
3721182.58	159.50	115.50	115.50	115.50	115.50	115.50	115.40	75.50	78.70
3721132.58	115.50	115.50	118.20	118.20	118.20	120.40	117.40	96.40	78.60
3721082.58	115.50	115.50	115.50	123.90	123.90	123.90	123.90	123.90	123.90
3721032.58	115.50	115.50	115.50	123.90	123.90	123.90	123.90	123.90	123.90
3720982.58	115.50	115.50	115.50	118.20	123.90	123.90	123.90	109.30	92.60
3720932.58	109.90	115.50	115.40	118.20	117.40	120.40	114.60	96.70	114.20
3720882.58	115.40	115.50	115.40	118.20	118.20	120.40	117.60	100.50	99.00
3720832.58	115.20	115.40	115.40	123.90	118.20	120.40	117.50	117.30	117.50
3720782.58	115.30	115.40	123.90	120.60	118.20	120.40	117.40	117.30	109.80
3720732.58	115.40	123.90	118.00	118.00	118.10	120.40	116.70	120.10	110.20
3720682.58	102.90	123.90	123.90	123.90	120.60	120.30	117.10	123.90	110.30
3720632.58	102.80	125.90	125.90	123.90	123.90	123.90	123.90	123.90	109.60
3720582.58	125.90	125.90	125.90	125.90	123.50	123.70	126.30	127.10	127.10
3720532.58	119.90	126.00	125.90	125.90	125.90	126.30	126.60	127.10	127.10

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD	X-COORD (METERS)							
(METERS)	431808.32	431858.32	431908.32	431958.32	432008.32	432058.32	432108.32	432158.32

3721332.58	80.80	80.00	81.10	79.40	79.90	80.30	80.60	80.90
3721282.58	80.10	79.80	79.70	78.60	78.40	79.30	79.30	79.30
3721232.58	80.10	80.20	79.40	78.20	77.90	79.10	79.10	79.00
3721182.58	79.00	79.70	78.50	77.90	77.90	78.60	79.00	79.00
3721132.58	78.00	79.00	77.90	77.60	77.90	78.30	78.30	78.60
3721082.58	120.40	92.50	77.80	77.40	77.60	77.50	77.70	78.30
3721032.58	123.90	123.90	110.40	110.40	110.40	90.00	90.00	78.70
3720982.58	123.90	123.90	120.10	110.40	109.90	90.00	89.90	87.60
3720932.58	110.40	123.90	123.90	117.90	90.00	89.90	89.90	88.20
3720882.58	110.60	123.90	126.30	123.90	110.40	88.00	87.90	87.70
3720832.58	117.50	117.30	127.10	115.60	110.40	88.50	89.70	88.90
3720782.58	110.40	110.40	123.90	110.90	110.90	110.40	89.70	89.90
3720732.58	110.10	110.40	110.40	116.40	110.90	110.40	88.70	88.80
3720682.58	110.30	110.90	105.10	105.30	110.90	110.60	104.90	87.80
3720632.58	110.90	110.80	104.30	104.90	104.90	110.60	104.90	103.40
3720582.58	105.50	105.50	104.20	102.80	103.30	103.40	104.90	103.40
3720532.58	127.10	127.10	101.40	102.00	103.10	100.90	104.50	103.40

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(431744.4, 3721165.3, 75.8, 78.5, 0.0); (431704.3, 3721167.9, 75.8, 77.6, 0.0);
(431688.2, 3721046.3, 79.9, 123.9, 0.0); (431704.3, 3720991.5, 87.8, 120.4, 0.0);
(431701.0, 3720934.7, 96.7, 96.7, 0.0); (431703.6, 3720877.2, 100.9, 100.9, 0.0);
(431700.3, 3720842.4, 103.8, 103.8, 0.0); (431696.9, 3720819.7, 105.5, 114.0, 0.0);
(431689.6, 3720783.6, 109.1, 109.1, 0.0); (431684.2, 3720724.8, 113.9, 113.9, 0.0);
(431680.9, 3720680.7, 114.2, 121.0, 0.0);

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

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*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

```
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: O:\3000-3999\30752430\30752430_HRA\HRA_Air Quality Data\msvj_sfc_pfl (2)\MSVJ_V1 Met Version: 22112

Profile file: O:\3000-3999\30752430\30752430_HRA\HRA_Air Quality Data\msvj_sfc_pfl (2)\MSVJ_V1

Surface format: FREE

Profile format: FREE

Surface station no.: 93184

Upper air station no.: 3190

Name: UNKNOWN

Name: UNKNOWN

Year: 2017

Year: 2017

First 24 hours of scalar data

YR MO DY JDY HR H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN ZO BOWEN ALBEDO REF WS WD HT REF TA HT

```

-----
17 01 01 1 01 -3.5 0.085 -9.000 -9.000 -999. 59. 15.7 0.20 1.20 1.00 0.86 69. 10.0 280.0 9.0
17 01 01 1 02 -3.7 0.087 -9.000 -9.000 -999. 62. 15.9 0.20 1.20 1.00 0.90 61. 10.0 279.7 9.0
17 01 01 1 03 -8.0 0.126 -9.000 -9.000 -999. 107. 22.3 0.20 1.20 1.00 1.34 69. 10.0 280.4 9.0
17 01 01 1 04 -3.1 0.081 -9.000 -9.000 -999. 56. 15.5 0.20 1.20 1.00 0.80 67. 10.0 279.9 9.0
17 01 01 1 05 -3.0 0.080 -9.000 -9.000 -999. 54. 14.8 0.15 1.20 1.00 0.86 113. 10.0 279.8 9.0
17 01 01 1 06 -6.1 0.109 -9.000 -9.000 -999. 86. 18.7 0.15 1.20 1.00 1.26 92. 10.0 279.9 9.0
17 01 01 1 07 -5.8 0.107 -9.000 -9.000 -999. 84. 18.8 0.20 1.20 1.00 1.14 86. 10.0 279.8 9.0
17 01 01 1 08 -3.2 0.087 -9.000 -9.000 -999. 61. 18.2 0.15 1.20 0.53 1.00 98. 10.0 280.2 9.0
17 01 01 1 09 36.6 0.148 0.553 0.005 163. 136. -7.8 0.15 1.20 0.31 1.12 106. 10.0 283.2 9.0
17 01 01 1 10 89.0 0.203 1.161 0.005 624. 219. -8.3 0.19 1.20 0.24 1.45 159. 10.0 285.0 9.0
17 01 01 1 11 102.2 0.298 1.444 0.005 1044. 390. -22.9 0.25 1.20 0.21 2.23 183. 10.0 285.5 9.0
17 01 01 1 12 116.1 0.262 1.560 0.005 1160. 323. -13.7 0.25 1.20 0.20 1.83 200. 10.0 286.2 9.0
17 01 01 1 13 114.8 0.302 1.599 0.005 1265. 399. -21.4 0.17 1.20 0.20 2.51 225. 10.0 286.6 9.0
17 01 01 1 14 98.2 0.415 1.544 0.005 1330. 641. -64.5 0.25 1.20 0.21 3.44 205. 10.0 286.5 9.0
17 01 01 1 15 79.0 0.324 1.451 0.005 1370. 448. -38.2 0.25 1.20 0.25 2.57 199. 10.0 286.4 9.0
17 01 01 1 16 26.2 0.313 1.007 0.005 1383. 420. -103.7 0.25 1.20 0.33 2.68 195. 10.0 286.5 9.0
17 01 01 1 17 -20.5 0.246 -9.000 -9.000 -999. 295. 66.8 0.25 1.20 0.61 2.33 190. 10.0 285.5 9.0
17 01 01 1 18 -7.1 0.119 -9.000 -9.000 -999. 109. 21.0 0.19 1.20 1.00 1.29 162. 10.0 284.2 9.0
17 01 01 1 19 -6.0 0.108 -9.000 -9.000 -999. 86. 18.7 0.15 1.20 1.00 1.25 117. 10.0 283.5 9.0
17 01 01 1 20 -8.2 0.127 -9.000 -9.000 -999. 108. 22.1 0.15 1.20 1.00 1.46 104. 10.0 283.4 9.0
17 01 01 1 21 -8.0 0.125 -9.000 -9.000 -999. 106. 21.8 0.15 1.20 1.00 1.44 120. 10.0 284.0 9.0
17 01 01 1 22 -7.3 0.120 -9.000 -9.000 -999. 100. 21.1 0.17 1.20 1.00 1.34 127. 10.0 284.3 9.0
17 01 01 1 23 -5.7 0.106 -9.000 -9.000 -999. 83. 18.6 0.17 1.20 1.00 1.19 128. 10.0 284.0 9.0
17 01 01 1 24 -9.5 0.137 -9.000 -9.000 -999. 122. 24.2 0.17 1.20 1.00 1.52 129. 10.0 283.9 9.0

```

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV

17 01 01 01 9.0 0 -999. -99.00 280.0 99.0 -99.00 -99.00

17 01 01 01 10.0 1 69. 0.86 -999.0 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43824 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD	X-COORD (METERS)									
(METERS)	431358.32	431408.32	431458.32	431508.32	431558.32	431608.32	431658.32	431708.32	431758.32	

3721332.58	0.00039	0.00043	0.00048	0.00054	0.00061	0.00068	0.00075	0.00080	0.00083	
3721282.58	0.00043	0.00048	0.00055	0.00062	0.00072	0.00082	0.00092	0.00100	0.00103	
3721232.58	0.00048	0.00054	0.00062	0.00072	0.00084	0.00099	0.00114	0.00127	0.00134	
3721182.58	0.00053	0.00062	0.00072	0.00085	0.00101	0.00122	0.00147	0.00170	0.00183	
3721132.58	0.00060	0.00069	0.00082	0.00100	0.00123	0.00154	0.00195	0.00241	0.00272	
3721082.58	0.00068	0.00080	0.00098	0.00120	0.00152	0.00200	0.00269	0.00356	0.00419	
3721032.58	0.00072	0.00089	0.00114	0.00146	0.00194	0.00274	0.00423	0.00668	0.00911	
3720982.58	0.00077	0.00095	0.00121	0.00170	0.00239	0.00367	0.00665	0.01732	0.04820	
3720932.58	0.00071	0.00088	0.00114	0.00182	0.00256	0.00411	0.00772	0.01887	0.04990	
3720882.58	0.00071	0.00085	0.00115	0.00186	0.00258	0.00390	0.00628	0.00946	0.01309	
3720832.58	0.00074	0.00091	0.00122	0.00178	0.00227	0.00301	0.00368	0.00393	0.00418	
3720782.58	0.00083	0.00102	0.00131	0.00153	0.00176	0.00195	0.00191	0.00171	0.00136	
3720732.58	0.00088	0.00104	0.00114	0.00119	0.00119	0.00115	0.00099	0.00090	0.00076	
3720682.58	0.00084	0.00095	0.00098	0.00091	0.00079	0.00068	0.00058	0.00055	0.00052	
3720632.58	0.00076	0.00082	0.00080	0.00068	0.00054	0.00045	0.00042	0.00039	0.00041	
3720582.58	0.00066	0.00066	0.00060	0.00050	0.00039	0.00032	0.00030	0.00030	0.00032	
3720532.58	0.00054	0.00052	0.00045	0.00036	0.00028	0.00023	0.00021	0.00022	0.00025	

*** AERMOD - VERSION 24142 *** ** C:\HRA\30752430_AERMOD\Model_infant_Unmit\Model_infant_Unmit.isc *** 01/06/26

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*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43824 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF DPM IN MICROGRAMS/M**3 **

Y-COORD	X-COORD (METERS)							
(METERS)	431808.32	431858.32	431908.32	431958.32	432008.32	432058.32	432108.32	432158.32

3721332.58	0.00082	0.00077	0.00069	0.00059	0.00050	0.00042	0.00035	0.00029
3721282.58	0.00103	0.00094	0.00082	0.00069	0.00056	0.00046	0.00037	0.00030
3721232.58	0.00133	0.00120	0.00100	0.00081	0.00063	0.00050	0.00039	0.00032
3721182.58	0.00180	0.00157	0.00125	0.00095	0.00071	0.00054	0.00041	0.00032
3721132.58	0.00259	0.00215	0.00157	0.00111	0.00078	0.00057	0.00042	0.00032
3721082.58	0.00400	0.00307	0.00199	0.00126	0.00083	0.00057	0.00042	0.00032
3721032.58	0.00778	0.00454	0.00240	0.00134	0.00083	0.00055	0.00040	0.00030
3720982.58	0.02417	0.00736	0.00268	0.00135	0.00081	0.00054	0.00038	0.00029
3720932.58	0.05471	0.01024	0.00262	0.00128	0.00078	0.00052	0.00037	0.00028
3720882.58	0.01770	0.00796	0.00261	0.00132	0.00081	0.00053	0.00037	0.00028
3720832.58	0.00450	0.00405	0.00232	0.00138	0.00085	0.00056	0.00039	0.00029
3720782.58	0.00182	0.00179	0.00181	0.00126	0.00085	0.00059	0.00042	0.00031
3720732.58	0.00085	0.00114	0.00125	0.00105	0.00079	0.00058	0.00043	0.00033
3720682.58	0.00058	0.00079	0.00083	0.00085	0.00069	0.00055	0.00043	0.00034
3720632.58	0.00045	0.00055	0.00063	0.00062	0.00061	0.00050	0.00041	0.00033
3720582.58	0.00036	0.00042	0.00048	0.00051	0.00049	0.00045	0.00038	0.00032
3720532.58	0.00030	0.00034	0.00038	0.00041	0.00041	0.00039	0.00034	0.00030

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*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43824 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
431744.40	3721165.27	0.00203	431704.29	3721167.94	0.00185
431688.25	3721046.30	0.00478	431704.29	3720991.49	0.01365
431700.95	3720934.68	0.01589	431703.63	3720877.19	0.00832
431700.28	3720842.44	0.00445	431696.94	3720819.71	0.00308
431689.59	3720783.62	0.00176	431684.24	3720724.80	0.00082
431680.90	3720680.69	0.00056			

*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

NETWORK

GROUP ID AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID

ALL 1ST HIGHEST VALUE IS 0.05471 AT (431808.32, 3720932.58, 91.70, 110.40, 0.00) GC UCART1
2ND HIGHEST VALUE IS 0.04990 AT (431758.32, 3720932.58, 92.40, 114.20, 0.00) GC UCART1
3RD HIGHEST VALUE IS 0.04820 AT (431758.32, 3720982.58, 90.50, 92.60, 0.00) GC UCART1
4TH HIGHEST VALUE IS 0.02417 AT (431808.32, 3720982.58, 82.40, 123.90, 0.00) GC UCART1
5TH HIGHEST VALUE IS 0.01887 AT (431708.32, 3720932.58, 96.70, 96.70, 0.00) GC UCART1
6TH HIGHEST VALUE IS 0.01770 AT (431808.32, 3720882.58, 94.00, 110.60, 0.00) GC UCART1
7TH HIGHEST VALUE IS 0.01732 AT (431708.32, 3720982.58, 89.90, 109.30, 0.00) GC UCART1
8TH HIGHEST VALUE IS 0.01589 AT (431700.95, 3720934.68, 96.71, 96.71, 0.00) DC
9TH HIGHEST VALUE IS 0.01365 AT (431704.29, 3720991.49, 87.82, 120.37, 0.00) DC
10TH HIGHEST VALUE IS 0.01309 AT (431758.32, 3720882.58, 99.00, 99.00, 0.00) GC UCART1

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)

A Total of 2 Warning Message(s)

A Total of 471 Informational Message(s)

A Total of 43824 Hours Were Processed

A Total of 92 Calm Hours Identified

A Total of 379 Missing Hours Identified (0.86 Percent)

***** FATAL ERROR MESSAGES *****

*** NONE ***

***** WARNING MESSAGES *****

ME W186 71 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

ME W187 71 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

*** AERMOD Finishes Successfully ***



Appendix D

Health Risk Calculation Worksheets

Construction Carcinogenic and Non-Carcinogenic Risks - 3rd Trimester Exposure Scenario (0.25-Year)

Project: Toll Brothers Laguna Hills Townhome Project	Engineer: B. Morrison	Date: 1/9/2026
		JN: 3075-2025-69

Exposure Factors	
Exposure Frequency ¹ :	91.25 days/year
Exposure Duration:	0.25 years
Daily Breathing Rate ² :	361 L/kg BW-day
Age Sensitivity Factor ³ :	10
Fraction of Time at Home (FAH):	1
Averaging Time (Cancer):	25,550 days
Averaging Time (Non-Cancer):	91.25 days

¹ Exposure frequency is based on the total number of active construction days during the first year of construction.

² Source: OEHHA Air Toxics Hot Spots Program Guidance Manual, Table 8.3: Age Sensitivity Factors by Age Group for Cancer Risk Assessment.

³ Source: OEHHA Air Toxics Hot Spots Program Guidance Manual, Table 5.6: Point Estimates of Residential Daily Breathing Rates for 3rd Trimester, 0<2, 2<9, 2<16, 16<30, and 16-70 years (L/kg BW-day).

$Cancer\ Risk = DPM\ Concentration \times CPF \times DBR \times ED \times EF \times ASF \times FAH \div 25550$
--

AERMOD Receptor ID (a)	Maximum Concentration		Weight Fraction (d)	Contaminant (e)	Carcinogenic Hazards		Noncarcinogenic Hazards		
	(ug/m ³) (b)	(mg/m ³) (c)			CPF (mg/kg/day) (f)	RISK (per million) (g)	REL (ug/m ³) (h)	RfD (mg/kg/day) (i)	Index (j)
1	0.00302	3.02E-06	1	DPM	1.10E+00	0.01	5.00E+00	1.43E-03	0.0006
2	0.00614	6.14E-06	1	DPM	1.10E+00	0.02	5.00E+00	1.43E-03	0.0012
3	0.01961	1.96E-05	1	DPM	1.10E+00	0.07	5.00E+00	1.43E-03	0.0039
4	0.00554	5.54E-06	1	DPM	1.10E+00	0.02	5.00E+00	1.43E-03	0.0011
5	0.00222	2.22E-06	1	DPM	1.10E+00	0.01	5.00E+00	1.43E-03	0.0004
6	0.00071	7.10E-07	1	DPM	1.10E+00	0.00	5.00E+00	1.43E-03	0.0001
7	0.00257	2.57E-06	1	DPM	1.10E+00	0.01	5.00E+00	1.43E-03	0.0005
8	0.01697	1.70E-05	1	DPM	1.10E+00	0.06	5.00E+00	1.43E-03	0.0034
9	0.01031	1.03E-05	1	DPM	1.10E+00	0.04	5.00E+00	1.43E-03	0.0021
10	0.00385	3.85E-06	1	DPM	1.10E+00	0.01	5.00E+00	1.43E-03	0.0008
11	0.00104	1.04E-06	1	DPM	1.10E+00	0.00	5.00E+00	1.43E-03	0.0002

Construction Carcinogenic and Non-Carcinogenic Risks - 3rd Trimester Exposure Scenario (0.25-Year)

Project:	Toll Brothers Laguna Hills Townhome Project	Engineer:	B. Morrison	Date:	1/9/2026
				JN:	3075-2025-69

Exposure Factors	
Exposure Frequency ¹ :	91.25 days/year
Exposure Duration:	0.25 years
Daily Breathing Rate ² :	361 L/kg BW-day
Age Sensitivity Factor ³ :	10
Fraction of Time at Home (FAH):	1
Averaging Time (Cancer):	25,550 days
Averaging Time (Non-Cancer):	91.25 days

¹ Exposure frequency is based on the total number of active construction days during the first year of construction.
² Source: OEHHA Air Toxics Hot Spots Program Guidance Manual, Table 8.3: Age Sensitivity Factors by Age Group for Cancer Risk Assessment.
³ Source: OEHHA Air Toxics Hot Spots Program Guidance Manual, Table 5.6: Point Estimates of Residential Daily Breathing Rates for 3rd Trimester, 0<2, 2<9, 2<16, 16<30, and 16-70 years (L/kg BW-day).

$$Cancer\ Risk = DPM\ Concentration \times CPF \times DBR \times ED \times EF \times ASF \times FAH \div 25550$$

AERMOD Receptor ID (a)	Maximum Concentration		Weight Fraction (d)	Contaminant (e)	Carcinogenic Hazards		Noncarcinogenic Hazards		
	(ug/m ³) (b)	(mg/m ³) (c)			CPF (mg/kg/day) (f)	RISK (per million) (g)	REL (ug/m ³) (h)	RfD (mg/kg/day) (i)	Index (j)
1	0.00302	3.02E-06	1	DPM	1.10E+00	0.01	5.00E+00	1.43E-03	0.0006
2	0.00614	6.14E-06	1	DPM	1.10E+00	0.02	5.00E+00	1.43E-03	0.0012
3	0.01961	1.96E-05	1	DPM	1.10E+00	0.07	5.00E+00	1.43E-03	0.0039
4	0.00554	5.54E-06	1	DPM	1.10E+00	0.02	5.00E+00	1.43E-03	0.0011
5	0.00222	2.22E-06	1	DPM	1.10E+00	0.01	5.00E+00	1.43E-03	0.0004
6	0.00071	7.10E-07	1	DPM	1.10E+00	0.00	5.00E+00	1.43E-03	0.0001
7	0.00257	2.57E-06	1	DPM	1.10E+00	0.01	5.00E+00	1.43E-03	0.0005
8	0.01697	1.70E-05	1	DPM	1.10E+00	0.06	5.00E+00	1.43E-03	0.0034
9	0.01031	1.03E-05	1	DPM	1.10E+00	0.04	5.00E+00	1.43E-03	0.0021
10	0.00385	3.85E-06	1	DPM	1.10E+00	0.01	5.00E+00	1.43E-03	0.0008
11	0.00104	1.04E-06	1	DPM	1.10E+00	0.00	5.00E+00	1.43E-03	0.0002

Cumulative Risk - Construction

Project:	Toll Brothers Laguna Hills Townhome Project	Engineer:	B. Morrison	Date:	1/9/2026
				JN:	3075-2025-69

Sensitive Receptor Location	AERMOD Receptor ID	Cumulative Cancer Risk (per one million)	Maximum Non-Cancer Hazard Index
1	1	0.3498	0.0006
	2	0.3308	0.0012
	3	0.8681	0.0039
	4	2.3000	0.0027
	5	2.6625	0.0032
	6	1.3925	0.0017
	7	0.7525	0.0009
	8	0.5747	0.0034
	9	0.3306	0.0021
	10	0.1506	0.0008
	11	0.0972	0.0002
Maximum		2.6625	0.0039
SCAQMD Threshold		10	1
Exceeds Threshold?		No	No