Appendix FEIR-3

Health Risk Assessment

HEALTH RISK ASSESSMENT

6000 Hollywood Project

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TABLE OF CONTENTS

LIST OF TABLES

1.0 Executive Summary

1.1 Findings

This report provides an analysis of potential health risk impacts related to the proposed construction and operation of the 6000 Hollywood Boulevard Project (Project) in the City of Los Angeles, California. The analysis identified the baseline condition around the Project and evaluated the incremental change in health risk concentration exposure from diesel exhaust/diesel particulate matter (DPM) emitted by heavy-duty construction equipment during construction and limited heavy-duty delivery trucks during operation[1] of the Project. The findings of the analysis are as follows:

- For carcinogenic exposures (construction and operational emissions), the increase in risk is calculated to be 3.7 in one million for residential uses, which is less than the applicable threshold of 10 in one million for sensitive receptors in close proximity to the Project Site, resulting in a less than significant impact.

- For chronic non-carcinogenic exposures (construction and operational emissions), the increase in the respiratory hazard index was estimated to be less than the applicable threshold of 1.0 for either chronic or acute effects at sensitive receptors in close proximity to the Project Site, resulting in a less than significant impact.

[1] *The Project would not support any land uses or activities that would involve the use, storage, or processing of carcinogenic toxic air contaminants. In addition, the proposed land uses would not generally involve the use of heavy-duty diesel trucks with the exception of occasional moving trucks, trash trucks or delivery trucks.*

2.0 Introduction

The Project includes the construction of a new mixed-use development that will comprise 501,185 square feet of new residential, commercial, and retail floor area across multiple structures. The Project would include 136,000 square feet of office space and 22,542 square feet of ground floor commercial space. To be clear, this is not the type of project that the regulatory agencies, nor the applicable regulatory laws, require to produce a Health Risk Assessment (HRA) for adequate disclosure of potential air quality impacts pursuant to the California Environmental Quality Act (CEQA).

The California Air Pollution Control Officers Association (CAPCOA) Guidance Document for Health Risk Assessments for Proposed Land Use Projects (2009) (CAPCOA HRA Guidance) provides lead agencies with guidance regarding when and how an HRA should be prepared. It bases the risk assessment methodology on the procedures developed by the California Office of Environmental Health Hazard Assessment (OEHHA) to meet the mandates of the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588). The CAPCOA HRA Guidance states that

> *There are basically two types of land use projects that have the potential to cause long-term public health risk impacts: Type A—land use projects with toxic emissions that impact receptors; and Type B land use projects that will place receptors in the vicinity of existing toxic sources. Type A project examples are combustion related power plants, gasoline dispensing facilities, asphalt batch plants, warehouse distribution centers, quarry operations, and other stationary sources that emit toxic substances. Type B project examples are project that place receptors near stationary sources, high traffic roads, freeways, rail yards, and ports.*

Note that the Project does not qualify as either a Type A or Type B project. Therefore, per the CAPCOA HRA Guidance in effect when the Draft EIR for the Project was prepared, the lead agency did not include an HRA in the Draft EIR. Accordingly, this HRA was done voluntarily for informational purposes only to supplement the administrative record and respond to comments. This HRA further demonstrates that even if an HRA were necessary under applicable case law and regulatory guidance (which it is not) the Project would not have a significant air quality impact, including as to TAC impacts.

The OEHHA adopted the Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (2003 Guidance Manual) in October of 2003. The

Guidance Manual was developed by OEHHA, in conjunction with the California Air Resources Board (CARB), for use in implementing the Air Toxics "Hot Spots" Program (Health and Safety Code Section 44360 et. seq.). The Air Toxics "Hot Spots" Program requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Program are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

OEHHA adopted a new version of the Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (2015 Guidance Manual) in March of 2015.[2] CARB acknowledges that the Guidance Manual does not include guidance for projects prepared under the auspices of CEQA and that it would be "handled by individual [Air Pollution Control] Districts."[3] As noted by CARB,

> *The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly) was enacted in September 1987. Under this, stationary sources are required to report the types and quantities of certain substances their facilities routinely release into the air. Emissions of interest are those that result from the routine operation of a facility or that are predictable, including but not limited to continuous and intermittent releases and process upsets or leaks….*
>
> *The Act requires that toxic air emissions from stationary sources (facilities) be quantified and compiled into an inventory according to criteria and guidelines developed by the ARB, that each facility be prioritized to determine whether a risk assessment must be conducted, that the risk assessments be conducted according to methods developed by OEHHA….*[4]

As reported above, applicability is associated with commercial and industrial operations. There are two broad classes of facilities subject to the AB 2588 Program: Core facilities and facilities identified within discrete industry-wide source categories. Core facilities subject to AB 2588 compliance are sources whose criteria pollutant emissions (particulate matter, oxides of sulfur, oxides of nitrogen, and volatile organic compounds) are 25 tons per year or more as well as those facilities whose criteria pollutant emissions are 10 tons per year or more but less than 25 tons per year. Industry-wide source facilities are classified as smaller operations with relatively similar emission profiles (e.g., auto body shops, gas

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2 *Office of Environmental Health Hazard Assessment, Air Toxicology and Epidemiology, Adoption of Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. March 6, 2015, www.oehha.ca.gov/air/hot_spots/hotspots2015.html, accessed August 8, 2023..*

3 *CARB, Risk Management Guidance for Stationary Sources of Air Toxics, July 23, 2015, p. 19, www.arb.ca.gov/toxics/rma/rmgssat.pdf.*

4 *CARB, Overview of the Air Toxics "Hot Spots" Information and Assessment Act ww2.arb.ca.gov/overview-air-toxics-hot-spots-information-and-assessment-act, accessed August 8, 2023.*

stations and dry cleaners using perchloroethylene). The emissions generated from the construction and subsequent occupancy of a mixed-use development project are not classified as core operations nor is it subject to industry-wide source evaluation.

The intent in developing the 2015 Guidance Manual was to provide HRA procedures for use in the Air Toxics Hot Spots Program or for the permitting of new or modified stationary sources. As noted above, the Project is not a new or modified stationary source that requires air quality permits to construct or operate. Air districts are to determine which facilities will prepare an HRA based on a prioritization process. The 2015 Guidance Manual provides recommendations related to cancer risk evaluation of short-term projects. As discussed in Section 8.2.10 of the 2015 Guidance Manual, "[t]he local air pollution control districts sometimes use the risk assessment guidelines for the Hot Spots program in permitting decisions for short-term projects such as construction or waste site remediation." Short-term projects that would require a permitting decision by South Coast Air Quality Management District (SCAQMD) typically would be limited to site remediation (e.g., stationary soil vapor extractors) and certain other activities that are not applicable to the Project. As noted above, neither construction, nor operation, of the Project are subject to SCAQMD permitting requirements. Therefore, read in context, the Guidance Manual's quoted statement from Section 8.2.10 regarding "short-term projects" does not apply to the Project. Additionally, the 2015 Guidance Manual does not provide specific recommendations for evaluation of short-term use of mobile sources (e.g., heavy-duty diesel construction equipment) that would be applicable to the Project.

Nonetheless, to be conservative, this HRA was prepared in part to analyze potential construction impacts. In addition, potential operational impacts, despite the fact that no considered stationary source is part of the Project's land uses, were assessed for informational purposes given the limited use of heavy-duty trucks associated with occasional moving trucks, trash trucks and delivery trucks.

OEHHA's 2015 Guidance Manual provides Age Sensitivity Factors (ASFs) to account for potential increased sensitivity of early-in-life exposure to carcinogens. For risk assessments conducted under the auspices of AB 2588, a weighting factor is applied to all carcinogens regardless of purported mechanism of action. In comments presented to the SCAQMD Governing Board (Meeting Date: June 5, 2015, Agenda No. 28) relating to toxic air contaminant exposures under Rules 1401 (New Source Review of Toxic Air Contaminants), use of the 2015 OEHHA guidelines and their applicability for projects subject to CEQA, as they relate to the incorporation of early-life exposure adjustments, it was reported that:

> *The Proposed Amended Rules are separate from the CEQA significance thresholds. The Response to Comments Staff Report PAR 1401, 1401.1, 1402, and 212 A - 8 June 2015 SCAQMD staff is currently evaluating how to*

implement the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will evaluate a variety of options on how to evaluate health risks under the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will conduct public workshops to gather input before bringing recommendations to the Governing Board.

SCAQMD, as a commenting agency, has not conducted public workshops nor developed policy relating to the applicability of applying the 2015 OEHHA guidance for projects prepared by other public/lead agencies subject to CEQA.

To emphasize variability in methodology for conducting HRAs, regulatory agencies throughout the State of California including the Department of Toxic Substances Control (DTSC) which is charged with protecting individuals and the environment from the effects of toxic substances and responsible for assessing, investigating and evaluating sensitive receptor populations to ensure that properties are free of contamination or that health protective remediation levels are achieved have adopted the U.S. Environmental Protection Agency's (USEPA's) policy in the application of early-life exposure adjustments.

Specifically, USEPA guidance relating to the use of early life exposure adjustments (*Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-003F*) are considered when carcinogens act "through the mutagenic mode of action." As reported:

The Agency considered both the advantages and disadvantages of extending the recommended, age dependent adjustment factors for carcinogenic potency to carcinogenic agents for which the mode of action remains unknown. EPA recommends these factors only for carcinogens acting through a mutagenic mode of action based on a combination of analysis of available data and long-standing science policy positions that set out the Agency's overall approach to carcinogen risk assessment, e.g., the use of a linear, no threshold extrapolation procedure in the absence of data in order to be health protective. In general, the Agency prefers to rely on analyses of data rather than on general defaults. When data are available for a susceptible lifestage, they should be used directly to evaluate risks for that chemical and that lifestage on a case-by-case basis. In the case of nonmutagenic carcinogens, when the mode of action is unknown, the data were judged by EPA to be too limited and the modes of action too diverse to use this as a category for which a general default adjustment factor approach can be applied. In this situation per the Agency's Guidelines for Carcinogen Risk Assessment, a linear low-dose extrapolation methodology is recommended. It is the Agency's long-standing science policy position that use of the linear low-dose extrapolation approach (without further adjustment) provides adequate public health conservatism in the absence of *chemical-specific data indicating differential early-life susceptibility or when the mode of action is not mutagenicity.*

In 2006, the USEPA published a memorandum which provides guidance regarding the preparation of health risk assessments should carcinogenic compounds elicit a mutagenic mode of action.[5] As presented in the technical memorandum, numerous compounds were identified as having a mutagenic mode of action. For diesel particulates, polycyclic aromatic hydrocarbons (PAHs) and their derivatives, which are known to exhibit a mutagenic mode of action, comprise less than one percent of the exhaust particulate mass. To date, the USEPA reports that whole diesel engine exhaust has not been shown to elicit a mutagenic mode of action.[6]

Based on a review of relevant guidance on the applicability of the use of early life exposure adjustments to identified carcinogens, the use of these factors would not be applicable to this HRA as neither the Lead Agency nor SCAQMD have developed recommendations on whether these factors should be used for CEQA analyses of potential DPM construction or operational impacts. For this assessment, the HRA relied upon USEPA guidance relating to the use of early life exposure adjustment factors (Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-003F) whereby adjustment factors are only considered when carcinogens act “through the mutagenic mode of action.” Therefore, early life exposure adjustments were not considered in this HRA.

The primary sources of potential air toxics associated with Project operations include DPM from delivery trucks (e.g., truck traffic on local streets and idling on adjacent streets associated with occasional moving trucks, trash trucks, and delivery trucks). However, these activities, and the land uses associated with the Project, are not considered land uses that generate substantial TAC emissions based on review of the air toxic sources listed in SCAQMD’s and CARB’s guidelines. It should be noted that SCAQMD recommends that HRAs be conducted for substantial individual sources of DPM (e.g., truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units) and has provided guidance for analyzing mobile source diesel emissions.[7] Based on this guidance, the Project is not considered these types of land uses and is not considered to be a substantial source of operational DPM warranting a refined HRA since daily truck trips to the Project Site would not exceed 100 trucks per day or more than 40 trucks with operating transport refrigeration units. In addition, the CARB-mandated ATCM limits diesel-fueled commercial vehicles (delivery trucks) to idle

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7 *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, 2003.*

for no more than 5 minutes at any given time, which would further limit diesel particulate emissions.

Although a construction and operational HRA is not required for the reasons discussed above, for informational purposes only, this HRA has been prepared to provide a good faith and reasoned response to public comments and to provide the City with additional substantial evidence that demonstrates that the Project would not create a significant health risk impact.

3.0 Health Risk Assessment

3.1 Project Description

The Project includes the construction of a new mixed-use development that will comprise 501,185 square feet of new residential, commercial, and retail floor area across multiple structures. The Project would include 136,000 square feet of office space and 22,542 square feet of ground floor commercial space. This HRA accounts for all development described above (in both construction and operation phases) of both the initial phase of the Project and the future expansion phase.

Certain activities would emit DPM from heavy-duty trucks and heavy-duty equipment used during construction and to a lesser extent heavy-duty trucks accessing the Project Site during operation of the Project associated with occasional moving trucks, trash trucks and delivery trucks. CARB and OEHHA have classified DPM as a carcinogen. Existing adjacent uses consist of residential uses located south of the site.

3.2 The Assessment Process

The risk assessment process provided in OEHHA's 2015 Guidance Manual consists of four basic steps: (1) hazard identification; (2) exposure assessment; (3) dose-response assessment; and (4) risk characterization. [8] In the first step, hazard identification involves determining the potential health effect which may be associated with emitted pollutants. The purpose is to identify qualitatively whether a pollutant is a potential human carcinogen or is associated with other types of adverse health effects. Depending on the chemical, these health effects may include short-term ailments or chronic diseases. The dose-response assessment is designed to characterize the relationship between the amount or dose of a chemical and its toxicological effect on the human body. Responses to toxic chemicals will vary depending on the amount and length of exposure. For example, short-term exposure to low concentrations of chemicals may produce no noticeable effect, but continued exposure to the same levels of chemicals over a long period of time may eventually cause harm. The purpose of the exposure assessment is to estimate the extent of exposure to each substance for which risk will be evaluated. This involves emission quantification, modeling of environmental transport, identification of chemicals of concern, identification of exposure routes, identification of exposed populations, and estimation of long-term exposure levels.

[8] *Office of Environmental Health Hazard Assessment, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February 2015, Page 2-1.*

Risk characterization is an integration of the health effects and public exposure information developed for emitted pollutants to provide a quantitative probability of adverse health effects.

3.3 Source Identification and Characterization

3.3.1 Source Identification

As indicated above, the primary source of potential air toxics associated with the Project is DPM from heavy-duty trucks and heavy-duty construction equipment used during construction and to a lesser extent heavy-duty trucks accessing the Project Site during operation of the Project associated with occasional moving trucks, trash trucks and delivery trucks. SCAQMD recommends that an HRA be conducted for substantial sources of long-term DPM operational sources (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[9] While Project construction and operation would not represent a long-term source of DPM emissions under SCAQMD Guidance[10], SCAQMD Guidance was used for purposes of modeling parameters and assumptions.

3.3.2 Source Characterization

Construction

As described in detail in Section II, Project Description, of the Draft EIR, Project construction would commence with demolition of the existing structures and surface parking areas. This phase would be followed by grading and excavation for the subterranean parking. The building foundations would then be laid, followed by building construction, paving/concrete installation, and landscape installation. Project construction is anticipated to commence in 2026 and be completed in 2029.

Total DPM emissions over the duration of Project construction were calculated using the SCAQMD recommended California Emissions Estimator Model (CalEEMod) and consistent with the methodology for calculating criteria pollutant emissions provided in Section IV.A, Air Quality, of the Draft EIR. The calculations of the emissions generated during Project construction activities reflect the types and quantities of construction

9 *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, August 2003.*

10 *Project construction is short term—44 months. Moreover, the Project is residential, commercial and office uses, none of which are associated with significant heavy-duty truck use or significant DPM emissions.*

equipment and haul trucks that would be used to complete the proposed construction activities.

CalEEMod calculates annual emissions based on worst-case conditions occurring on a daily basis. This scenario would not represent real world conditions as construction activities and equipment would not be expected to operate at 100 percent on an average daily basis. Construction surveys prepared for CARB have documented that on a typical construction site, daily average equipment hours range from 2 to 7.5 hours (25 percent to 94 percent of an 8 hour work-day) depending on the type of equipment.[11] Therefore, an adjustment was taken into account which assumes that annual average emissions would conservatively represent 80 percent of a worst-case day.

As an example, the heavy-duty construction equipment mix provided in the air quality analysis for the foundation phase reflects all equipment needed for the largest concrete pour day. Thus, average daily DPM emissions from building foundation would be substantially less since maximum pour days would not occur every day during that phase.

The Project is conservatively assumed to start construction in 2026 and to be completed by 2029. Based on SCAQMD factors, the construction equipment and truck fleet mix will emit less pollution in future years due to more stringent emissions control regulations. As construction activities for the Project are evaluated based on an earlier start date, the emissions presented are more conservative.

The calculation of DPM emissions was based on the 6000 Hollywood Construction Onsite CalEEMod output file provided in Appendix B, Air Quality and Greenhouse Gas Emissions, of the Draft EIR. It was assumed that all on-site (e.g., off-road equipment) equipment would be diesel and, therefore, on-site exhaust PM_{10} emissions were included in this HRA as DPM. The CalEEMod output file is provided in Appendix A of this HRA.

Operation

As discussed above, the Project includes the construction of a new mixed-use development that will comprise 501,185 square feet of new residential, commercial, and retail floor area across multiple structures. The Project would include 342,643 sf (350 units), 136,000 square feet of office space and 22,542 square feet of ground floor commercial space.

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11 *California Air Resources Board, Characterization of the Off-Road Equipment Population, December 2008.*

A conservative estimate of the number of daily truck trips is provided below based on the National Cooperative Highway Research Program Truck Trip Generation Data.[12]

- Table D-2c of the NCHRP data (Trip Generation Summary—Daily Commercial Vehicle Trips per 1,000 sf of Building Space for Retail (includes restaurants)) provides an average of 0.324 truck trips per 1,000 sf or approximately 5.3 truck trips per day ((22,542 sf/1,000 sf) x 0.324 trips/1,000 sf/day) for the Project's commercial floor area. This assumes that all trucks would be diesel even though many retail/restaurant truck deliveries are from smaller gasoline or alternative energy source trucks (e.g., UPS or FedEx).
- Table D-2d of the NCHRP data (Trip Generation Summary—Daily Commercial Vehicle Trips per 1,000 sf of Building Space for Office and Services provides an provides an average of 0.039 truck trips per 1,000 sf or approximately 7.3 truck trips per day ((136,000 sf/1,000 sf) x 0.039 trips/1,000 sf/day) for the Project's office use. It is conservatively assumed that all of these delivery trucks would be heavy-duty diesel trucks even though many residential truck deliveries are from smaller gasoline or alternative energy source trucks (e.g., UPS or FedEx).
- Table D-2e of the NCHRP data (Trip Generation Summary—Daily Commercial Vehicle Trips per 1,000 sf of Building Space for Other Land Uses (includes residential)) provides 0.011 truck trips per 1,000 sf or approximately approximately 3.8 truck trips per day ((342,643 sf/1,000 sf) x 0.011 trips/1,000 sf/day) for the Project's office use. It is conservatively assumed that all of these delivery trucks would be heavy-duty diesel trucks even though many residential truck deliveries are from smaller gasoline or alternative energy source trucks (e.g., UPS or FedEx).

Accordingly, the Project is conservatively estimated to generate approximately 17 trucks per day during operation of which one truck associated with restaurant/retail land uses were assumed to include transportation refrigeration units (TRUs) or 10 percent of the 5.3 total trucks associated with restaurant/retail land uses.

Emissions from TRUs were estimated using the CARB Draft 2019 Emissions Inventory for Transportation Refrigeration Units.[13] Emissions from delivery trucks travelling to and from the Project Site as well as idling were estimated using the CARB EMFAC2021

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12 *National Cooperative Highway Research Program (NCHRP) Synthesis 298 Truck Trip Generation Data, 2001.*

13 *California Air Resources Board. Draft 2019 Update to Emissions Inventory for Transportation Refrigeration Units. October 2019.*

model.[14] Trucks travelling to/from the loading docks generate emissions through truck engine idling, TRU operation and travelling.

Importantly, with respect to truck emissions associated with the operation of projects, SCAQMD recommends that HRAs be conducted for substantial sources of DPM for developments that include truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating TRUs. In other words, SCAQMD has identified an amount of truck trips per day that could warrant conducting an HRA to analyze emissions and health risks. Projects with truck trips below the aforementioned amounts should not be considered a substantial source of DPM and HRAs are neither recommended nor required by the applicable regulatory documents. As set forth above, operational truck use is well below both of these benchmarks.

Specifically, the Project is not considered to be a substantial source of operational DPM warranting an HRA because there are only 17 daily truck trips to the Project Site (of which 1 is assumed to be TRUs), which is far below the either more-than-100-trucks-per-day or more-than-40-TRU-trucks-per-day that indicate when a project could be considered a substantial DPM source. Nonetheless, operational health risks from use of operational delivery trucks for the Project was evaluated for informational purposes and included in this HRA.

Note also that, based on SCAQMD guidance, there is no quantitative analysis required for future cancer risk within the vicinity of the Project because it is consistent with the recommendations regarding the siting of new sensitive land uses near potential sources of TAC emissions provided in the SCAQMD Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.

The Project would include one emergency generator. Emissions were based on a 300-horsepower diesel generator with EPA Tier 4 emissions compliant controls. It is not yet known where the generator will be placed exactly. However, it was conservatively assumed that the new generator has the potential to be located within 50 meters (approximately 170 feet) of residential uses and therefore, the Project would be required to comply with the new requirements of SCAQMD Rule 1470.[15] DPM emissions were calculated consistent with the emission factors in Table 1 of SCAQMD Rule 1470. The emergency generator would likely be permitted for 200 hours per year consistent with SCAQMD Rule 1470. Although the

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14 *Airborne Toxic Control Measure is set forth in title 13, CCR, section 2485 and requires that drivers of diesel-fueled commercial motor vehicles with gross vehicle weight ratings greater than 10,000 pound not idle the vehicle's primary diesel engine longer than five minutes at any location. 5-minute idle time applies to all heavy-duty truck – construction as well as operational trucks.*

15 *A Project Design Feature will be included as a Correction and Addition in the Final EIR requiring new generators to meet the new emission standards included in Table 1 of SCAQMD Rule 1470.*

generator would typically be run one hour per month for testing (12 hours per year), it was conservatively assumed that generators would run for 200 hours per year.

3.3.3 Baseline and Identification of Chemicals of Concern

The Draft EIR identified the baseline of conditions around the Project Site and the ambient levels of TACs. SCAQMD released the fourth round of its Basin-wide Multiple Air Toxics Exposure Study (MATES V – Final Report) in April 2021. MATES V estimated the cancer risk from TAC emissions throughout the Basin by conducting a monitoring program, an updated emissions inventory of TACs, and a modeling effort to characterize health risks in the air basin. As part of MATES V, SCAQMD prepared an interactive map that shows estimates of cancer risks in the Basin from ambient levels of TACs based on the modeling effort to provide insight into relative risks. The map reports estimated cancer risks for discrete two-kilometer-by-two-kilometer grid cells. The cancer risk estimates reported there should not be interpreted as actual rates of disease in the exposed population, but rather as estimates of potential risk, based on a number of conservative assumptions. In general, MATES V indicates that the highest cancer risks from TACs are found near shipping ports, goods movement sources, and near freeways and other transportation corridors. MATES V identifies that the cancer risk is approximately 528 per one million at the Project Site.

This HRA identifies the baseline condition and also identifies the actual additional risks due to certain emissions associated with the Project. Note that, as discussed above, the CAPCOA regulatory guidance adopted at the time the Draft EIR was prepared indicates that HRAs should assess Type A (toxic emissions) and Type B (placing receptors near existing toxic sources) projects with within the CEQA context. This HRA presents the incremental health risks analysis even though the Project does not qualify as either a Type A or Type B project. Accordingly, this voluntary HRA analysis is informational, further informs the public and decision makers, and confirms the analysis previously set forth in the Draft EIR, but it is not required pursuant to the laws in effect when the Draft EIR was prepared. Nonetheless, this HRA quantitatively evaluated DPM as a chemical of concern for potential health effects in two categories, carcinogenic and non-carcinogenic.

3.4 Exposure Quantification

Consistent with SCAQMD's Localized Significance Threshold Methodology (LST Guidelines), this HRA used USEPA's Regulatory Model AERMOD to assess the downwind extent of DPM concentrations from proposed construction and operational activities.[16] AERMOD accounts for a variety of refined, site-specific conditions that facilitate an accurate assessment of Project impacts. AERMOD's air dispersion algorithms are based upon a

[16] *SCAQMD, Final-Localized Significance Threshold Methodology, 2008.*

planetary boundary layer turbulence structure and scaling concepts, including the treatment of surface and elevated sources in simple and complex terrain.

Exhaust emissions from construction equipment was treated as an area source with elevated release. As the Project consists of multiple buildings with varying construction activities, sources of construction emissions were placed according to locations of specific buildings. As described in the Section II, Project Description, of the Draft EIR, Building B would be a high rise building (35-story) which requires more intensive construction activities in comparison to other portions of the site which are comprised of low-rise buildings of 6-stories or less. Construction emissions were allocated according to the square footage and excavation quantities of each building area.

Project operational equipment were treated as a set of side-by-side elevated volume sources. The release height was assumed to be 12 feet. This represents the mid-range of the expected plume rise from operational heavy-duty trucks during daytime atmospheric conditions. For the purpose of this HRA, construction exhaust emissions were assumed to take place over a 44-month (3.7 year) duration on weekdays between 7 A.M. to 3 P.M. (8hour period). Operational exhaust emissions were assumed to take place 6-days per week between 7 A.M. to 3 P.M. (8hour period) and included 15 minutes of idle time to account for ingress, egress, and travel on-site.[17] These durations represent average workdays and, periodic changes to the construction hours would not modify the underlying conclusions of this analysis.

Air dispersion models require additional input parameters including local meteorology and receptors. Due to the sensitivity to individual meteorological parameters such as wind speed and direction, the USEPA recommends that meteorological data used as input into dispersion models be selected on the basis of relative spatial and temporal conditions that exist in the area of concern. In response to this recommendation, meteorological data from the SCAQMD Central Los Angeles monitoring station (Source Receptor Area 1) were used to represent local weather conditions and prevailing winds.

Cartesian receptor grids were used to represent adjacent and nearby sensitive land uses. The Cartesian receptor grids were placed at each sensitive use with a built-in 10 meter spacing for the nearby residential uses. All receptors were placed at ground level, which is recommended by SCAQMD for AERMOD modeling. Elevations for both sources and receptors were provided by the U.S. Geological Survey (USGS) and included using the AERMOD terrain processor AERMAP.

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[17] *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, 2003, www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis.*

DPM modeled concentrations were used to calculate cancer risk and chronic hazard index at each relevant receptor. A graphical representation of the source-receptor grid network is presented in Appendix C.

3.5 Risk Characterization

3.5.1 Carcinogenic Chemical Risk

Health risks associated with exposure to carcinogenic compounds at sensitive land uses in close proximity to the Project can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. Under a deterministic approach (i.e., point estimate methodology), the cancer risk probability is determined by multiplying the chemical's annual concentration by its unit risk factor (URF). The URF is a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. It represents an upper bound estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter (⌠g/m^3) over a 70-year lifetime. SCAQMD recommends a threshold of ten in one million cancer risk for evaluating carcinogenic impacts at sensitive receptors.[18]

The equation used to calculate the potential excess cancer risk is:

$$Risk_i = C_i \text{ X } CP_i \text{ X } DBR \text{ X } EVF$$

Where:

$Risk_i$ = Lifetime Excess Cancer Risk from exposure to $chemical_i$
C_i = Representative Air Concentration for $chemical_i$ (µg/m^3)
CP_i = $Cancer Potency_i$ (mg/kg-day)$^{-1}$
DBR = Daily Breathing Rate (L/kg body weight-day)
EVF = Exposure Value Factor (unitless)

An estimate of an individual's incremental excess cancer risk from exposure to Project construction and operational DPM emissions is calculated by summing the chemical-specific excess cancer risks. In addition, cancer risk is evaluated based on the duration on which a sensitive receptor is exposed to DPM (exposure duration). Based on OEHHA guidelines, it is recommended that cancer risk analyses assume an exposure duration of 30-years for

18 *SCAQMD, Air Quality Significance Thresholds, www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2, accessed August 8, 2023.*

residential receptors.[19] The exposure duration takes into account the construction duration of 44 months during construction, and operational emissions occurring each year.

3.5.2 Non-Carcinogenic Chemical Risk

The potential for chronic non-carcinogenic health effects is evaluated by calculating the total hazard index (HI) for the Project construction and operational DPM emissions. This HI represents the sum of the hazard quotients (HQs) developed for each individual project-related chemical, where a HQ is the ratio of the representative air concentration of the chemical to the chemical specific non-cancer Reference Exposure Level (REL). The non-cancer RELs represent the daily average exposure concentration at (or below) which no adverse health effects are anticipated.

The equations used to calculate the chemical-specific HQs and HIs are:

$$HQ_i = C_i / REL_i$$
$$HI = \Sigma\ HQi$$

Where:

HQ_i = Hazard Quotient for $chemical_i$
C_i = Average Daily Air Concentration for $chemical_i$ ($\mu g/m^3$)
REL_i = Noncancer Reference Exposure Level for $chemical_i$ ($\mu g/m^3$)
HI = Hazard Index

SCAQMD recommends that the non-carcinogenic hazards of toxic air contaminants should not exceed a hazard index of 1.0 for either chronic or acute effects.[20] Acute effects are due to short-term exposure, while chronic effects are due to long-term exposure to a substance. For chronic and acute risks, the hazard index is calculated as the summation of the hazard quotients for all chemicals to which an individual would be exposed. The acute hazard index was not quantified since an inhalation REL has not been determined by the OEHHA for DPM at the time of preparation of this HRA or the Draft EIR.

3.6 Conclusions

The results from the health risk calculations provide an estimate of the potential risks and hazards to individuals through inhalation of Project construction DPM emissions over a 44-month duration. Consistent with OEHHA guidelines, health risk impacts from Project

[19] *Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program, Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, February 2015.*

[20] *SCAQMD, Air Quality Significance Thresholds, www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2, accessed August 8, 2023.*

operational DPM emissions were assessed over a 30-year exposure duration for residential receptors. The estimated risks and hazards include: lifetime excess cancer risk estimates, and cumulative chronic HI estimates for the receptor locations of concern.

As shown in Appendix B and in Table 1 below, the results of the HRA yields a maximum off-site individual cancer risk of 3.7 in a million for residential uses located south of the Project Site (for combined construction and operational emissions).[21] The maximum chronic risk of 0.013 occurs within this same residential receptor area. As the Project (construction and operational emissions, separate and cumulative) would not emit carcinogenic or toxic air contaminants that result in impacts which exceed the maximum individual cancer risk of ten in one million or the chronic index of 1.0, Project-related toxic emission impacts would be less than significant.

Table 1
Health Risk Assessment (Combined Construction and Operational Emissions)

Risk	Significance Threshold	Calculated Risk	Significant Impact
Cancer Risk (Resident)	10 in 1 Million	3.71E-06 which denotes excess cases of cancer of 3.7 in one million	No
Non-Carcinogenic Risk (Maximum)	Chronic Index (HI) of 1.0	1.3E-02 which denotes an HI of 0.013	No

21 *As combined emissions (construction and operations) are below significance thresholds, individual emissions (i.e., construction separate from operational emission) are necessarily below the significance thresholds and the thresholds are the same as between the two.*

4.0 Uncertainty Assessment

Evaluating carcinogenic pollutant concentrations based on OEHHA methodology and SCAQMD Guidance has an implied uncertainty. These methodologies were developed to provide a conservative health risk estimate. The conservative nature of this methodology relies on a number of inputs designed to prevent an underestimation of risk. The following discusses the conservative nature of the risk assessment analysis assumptions utilized in this analysis.

The cancer risk from DPM occurs mainly through inhalation. Output from the dispersion analysis was used to estimate the DPM concentrations. The cancer risk estimate is then calculated based on those estimated DPM concentrations using the risk methodology promulgated by OEHHA. The risk assessment guidelines established by SCAQMD and included in the analysis are designed to produce conservative (high) estimates of the risk posed by DPM, due to the following factors:

- As a conservative measure, SCAQMD does not recognize indoor adjustments for residential uses. However, studies have shown that the typical person spends approximately 87 percent of their time indoors, 5 percent of their time outdoors, and 7 percent of their time in vehicles. A DPM exposure assessment showed that an average indoor concentration was 2.0 $\mu g/m^3$, compared with an outdoor concentration of 3.0 $\mu g/m^3$.[22]

- OEHHA has a toxicity database that lists TACs and their URFs. A URF describes the cancer potency of a particular TAC and is used to estimate cancer risk. Most of these URFs are extrapolated from animal studies based on continuous exposure to particular toxin. This method can have some significant uncertainties. For example, a chemical that is carcinogenic by one route of exposure is considered to be carcinogenic for all routes of exposure at its maximum potency. Also, it is not realistic for a receptor to be exposed to a continuous concentration of TACs over time. In reality, receptors are exposed to constantly changing concentration levels that would expose receptors to lower levels of TACs over time than analyzed in this analysis.

- The use of the SCAQMD meteorological data set and conservative exposure assumptions (e.g., assumes receptor would be located outside in the same

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22 *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, 2002.*

location 24 hours per day for the entire construction duration) amongst others, likely also lead to overestimated risks.

As such, uncertainty in the health risk analysis is conservative in nature and is designed to prevent undisclosed impacts to human health. Concentrations reported in this report represent a conservative scenario that is likely an over estimation of actual pollutant concentrations.

Appendix A

Emissions Calculations and CalEEMod Output File

6000 Hollywood

Construction Emissions

Phase	Year	Daily Emissions lbs/day	Duration days	Total Emissions For Phase lbs	Emissions Per Day lbs/day	Emission Rate Per Hour lbs-hour	Site Wide Annual Emission Rate lbs-hr/ft2
Demolition	2026	0.04	42	1.68			
Grading	2026	0.24	110	26.40			
Mat Foundation	2026	0.08	43	3.44			
Foundation	2026	0.03	43	1.29			
Building Construction	2026	0.05	21	1.05			
Total Emissions 2026			259	33.86	**1.31E-01**	**1.63E-02**	**8.36E-08**
Building Construction	2027	0.53	246	130.38	**5.30E-01**	**6.63E-02**	**3.39E-07**
Building Construction	2028	0.47	248	116.56	**4.70E-01**	**5.88E-02**	**3.01E-07**
Building Construction	2029	0.29	168	48.72	**2.90E-01**		
Paving	2029	0.05	87	4.35	**5.00E-02**		
Architectural Coating	2029		175	0.00	**0.00E+00**		
TotalEmissions 2029				53.07	**5.76E-02**	**7.20E-03**	**3.69E-08**
			1267	367.73	Average	3.71E-02	1.90E-07

Emissions Allocation by Building Square Footage

Buliding	Square Feet	Percent of Total	Average Emission Rate (lbs/hr)
Building A	136,000	27%	1.01E-02
Building B	289,079	58%	2.14E-02
Building C	23,560	5%	1.75E-03
Remaining Buildings	52,546	10%	3.89E-03
Total Construction	501,185		3.71E-02

6000 Hollywood

Emergency Generator - Emissions Calculations

CalEEMod Output

Equipment Type	Exhaust PM10 (lbs/year)	
Emergency Generator - Diesel (HP Rating)	300	
Load Factor	0.73	CalEEMod Default
Hours per year	200	Likely permitted hours (SCAQMD Rule 1470)
Emission Factor (g/hp-hr)	0.01	Adjusted based on new SCAQMD Rule 1470 standard (0.01 g/bhp/hr)
Emissions per Year (g)	438	
Days per Year	365	
Hours per Day	24	
Seconds per Year	31536000	
Emission Rate (g/s)	1.38889E-05	

Note: SCAQMD Rule 1470 was amended on October 1, 2021. Table 1 in SCAQMD Rule 1470 provides new PM emission standards for emergency generators located at sensitive receptors (e.g., residences) or within 50 meters from a sensiteve receptor.
Engines between 175 hp and 750 hp have a limit of 0.01 g/bhp-hr. Therefore, the emission rate for the emergency generator was updated to account for the amended rule.

6000 Hollywood

Operational HRA - On-site Truck Emissions

Diesel Particulate Emission Factors - T7 Single Truck (EMFAC2021 - Year 2026)

Speed	g/mi	
5	0.0099	Idle emission factor
15	0.0065	On-site travel emission factor. T8 Tractor

Emissions Calculations (Loading Docks)

Land Use	TSF	Truck Trips/TSF	Truck Trips
Residential	342.643	0.011	3.8
Office and Hotel	136	0.039	5.3
Commercial	22.542	0.324	7.3
Total	501.185		17

National Cooperative Highway Research Program (NCHRP) Synthesis 298 Truck Trip Generation Data, 2001, http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_298.pdf.

Transportation Northwest, Truck Trip Generation by Grocery Stores, Final Report TNW2010-04,

Parameter	Loading Dock	
Average Trucks per Day	**17.0**	
Days per Year	312	6 days per week
Trucks per Year	5,304	
Idle time per Truck (min)	15	5 minutes x 3 (enter, loadi
Idle time per Truck (hrs)	0.25	
Idle time per year (hrs)	1326	
Idle Emission Factor (g/hr)	0.0099	
Idle emissions per year (g)	13.15	
Annual Idle emission rate (g/s)	**1.25E-06**	8-hour operation

Transportation Refrigeration Unit (TRU)

Emission Rate (g/hr)	0.38	See TRU Emission Factor (
TRU Operation Time per Truck (hrs)	2	Duration of time at loading
Daily Number of Trucks with TRU	**1.0**	
Total Annual TRU Hours	626	6 days per week operation
Total Annual TRU Emissions (g)	240.7	
Annual TRU Emission Rate (g/s)	**2.29E-05**	8-hour operation
Total Emission Rate (g/s)	**2.42E-05**	AERMOD Input - Idle + Tra

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2029
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, g/mile for RUNEX, PMBW and PMTW, mph for Speed, kWh/mile for Energy Consumption, gallon/mile for Fuel Consumption. PHEV calculated based on total VMT.

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	PM2.5_RUNEX	PM10_RUNEX
Los Angeles (SC)	2029	T7 Tractor Class 8	Aggregate	5	Diesel	0.009	0.010
Los Angeles (SC)	2029	T7 Tractor Class 8	Aggregate	15	Diesel	0.006	0.007

CARB Draft 2019 TRU Emissions Inventory Output

Scenario	Calendar Year	Equipment Sector	Air Basin	Equipment Type	Horsepower Group	Population	Activity	PM10
Existing ATCM	2029	trailgc	SC	genca	GE23LT25	1,361	1000	0.00502213
Existing ATCM	2029	trailgc	SC	genca	GE25	248	1000	0.0001866
Existing ATCM	2029	trailgc	SC	genca	LT23	0	1000	0
Existing ATCM	2029	trailgc	SC	genoos	GE23LT25	5,398	1000	0.00316182
Existing ATCM	2029	trailgc	SC	genoos	GE25	999	1000	0.00012103
Existing ATCM	2029	trailgc	SC	genoos	LT23	0	1000	0
Existing ATCM	2029	trailgc	SC	truca	GE23LT25	5,270	2201	0.05562552
Existing ATCM	2029	trailgc	SC	truca	GE25	7,756	2201	0.0215426
Existing ATCM	2029	trailgc	SC	truoos	GE23LT25	41,352	2201	0.07015968
Existing ATCM	2029	trailgc	SC	truoos	GE25	10,260	2201	0.00389472
Existing ATCM	2029	truck	SC	truca	LT23	2,744	1360	0.01925316
Existing ATCM	2029	truck	SC	truoos	LT23	6	1360	4.4184E-06

Total TRU Hours (Annual)	154,013,427	All TRUs in South Coast Air Basin
Total PM10 Emissions (tons/year)	65.32	Total tons per day x 365
Emission Rate (tons/hour)	4.24E-07	
Emission Rate (lbs/hr)	0.0008	
Emission Rate (g/hr)	**0.38**	

Units
All population is one TRU unit
All activity is in hours per year of run time
All emissions are in standard tons per day
All fuel consumption is gallons per year

Source: https://ww3.arb.ca.gov/msei/ordiesel/draft2019truei.pdf

6000 Hollywood - Construction Onsite Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	6000 Hollywood - Construction Onsite
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	16.8
Location	6000 Hollywood Blvd, Los Angeles, CA 90028, USA
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4352
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	350	Dwelling Unit	3.73	342,643	55,523	—	828	—

General Office Building	136	1000sqft	0.00	136,000	0.00	—	—	—
High Turnover (Sit Down Restaurant)	4.04	1000sqft	0.00	4,038	0.00	—	—	—
Enclosed Parking with Elevator	894	Space	8.05	357,600	0.00	—	—	—
Other Non-Asphalt Surfaces	42.6	1000sqft	0.98	0.00	0.00	—	—	—
Strip Mall	18.5	1000sqft	0.00	18,504	0.00	—	—	—
Recreational Swimming Pool	0.77	1000sqft	0.02	765	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.4	32.4	43.9	0.08	0.84	9.27	10.1	0.77	0.93	1.66	7,791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	24.3	26.7	34.6	0.06	0.81	9.27	10.1	0.75	0.93	1.66	6,257
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.9	18.5	22.7	0.04	0.53	3.56	3.99	0.49	0.37	0.77	4,217
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.17	3.37	4.14	0.01	0.10	0.65	0.73	0.09	0.07	0.14	698

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2026	2.49	25.5	34.6	0.06	0.79	9.27	10.1	0.73	0.93	1.66	6,253
2027	2.75	25.8	31.7	0.06	0.74	0.31	1.05	0.68	0.03	0.71	5,887
2028	2.64	24.9	31.6	0.06	0.66	0.31	0.97	0.61	0.03	0.64	5,886
2029	25.4	32.4	43.9	0.08	0.84	0.35	1.19	0.77	0.04	0.81	7,791
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2026	2.85	26.7	34.6	0.06	0.81	9.27	10.1	0.75	0.93	1.66	6,257
2027	2.75	25.8	31.7	0.06	0.74	0.31	1.05	0.68	0.03	0.71	5,887
2028	2.64	24.9	31.6	0.06	0.66	0.31	0.97	0.61	0.03	0.64	5,887
2029	24.3	24.2	31.5	0.06	0.61	0.31	0.92	0.56	0.03	0.59	5,885
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2026	1.44	13.3	18.9	0.03	0.43	3.56	3.99	0.40	0.37	0.77	3,298
2027	1.96	18.5	22.7	0.04	0.53	0.21	0.74	0.49	0.02	0.51	4,205
2028	1.89	17.8	22.7	0.04	0.47	0.21	0.69	0.44	0.02	0.46	4,217
2029	11.9	13.5	17.9	0.03	0.34	0.15	0.49	0.32	0.02	0.33	3,254
Annual	—	—	—	—	—	—	—	—	—	—	—
2026	0.26	2.43	3.45	0.01	0.08	0.65	0.73	0.07	0.07	0.14	546
2027	0.36	3.37	4.13	0.01	0.10	0.04	0.13	0.09	< 0.005	0.09	696
2028	0.35	3.25	4.14	0.01	0.09	0.04	0.13	0.08	< 0.005	0.08	698
2029	2.17	2.45	3.27	0.01	0.06	0.03	0.09	0.06	< 0.005	0.06	539

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	9.09	16.6	0.03	0.31	—	0.31	0.29	—	0.29	2,495
Demolition	—	—	—	—	—	2.32	2.32	—	0.35	0.35	—
Onsite truck	0.01	0.39	0.28	< 0.005	< 0.005	1.53	1.53	< 0.005	0.15	0.15	71.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.05	1.91	< 0.005	0.04	—	0.04	0.03	—	0.03	287
Demolition	—	—	—	—	—	0.27	0.27	—	0.04	0.04	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	8.15
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	47.5
Demolition	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	1.35
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.3. Grading (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.24	19.2	32.9	0.05	0.79	—	0.79	0.73	—	0.73	5,812
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.10	2.31	1.69	< 0.005	< 0.005	9.27	9.27	< 0.005	0.93	0.93	437
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.24	19.2	32.9	0.05	0.79	—	0.79	0.73	—	0.73	5,812
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.09	2.42	1.75	< 0.005	< 0.005	9.27	9.27	< 0.005	0.93	0.93	441

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	5.78	9.91	0.02	0.24	—	0.24	0.22	—	0.22	1,751
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.71	0.52	< 0.005	< 0.005	2.66	2.67	< 0.005	0.27	0.27	132
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.05	1.81	< 0.005	0.04	—	0.04	0.04	—	0.04	290
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	0.13	0.09	< 0.005	< 0.005	0.49	0.49	< 0.005	0.05	0.05	21.9
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.5. Mat Foundation (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	18.3	22.8	0.04	0.64	—	0.64	0.59	—	0.59	3,601
Onsite truck	0.32	7.23	5.39	0.01	< 0.005	3.86	3.87	< 0.005	0.40	0.40	1,184
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	2.16	2.69	< 0.005	0.08	—	0.08	0.07	—	0.07	424
Onsite truck	0.04	0.87	0.64	< 0.005	< 0.005	0.43	0.44	< 0.005	0.04	0.05	140
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.39	0.49	< 0.005	0.01	—	0.01	0.01	—	0.01	70.2
Onsite truck	0.01	0.16	0.12	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	23.2
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.7. Foundation (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	8.98	10.4	0.02	0.30	—	0.30	0.27	—	0.27	1,575
Onsite truck	0.02	0.51	0.40	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	79.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.06	1.23	< 0.005	0.03	—	0.03	0.03	—	0.03	186
Onsite truck	< 0.005	0.06	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	9.28
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	30.7

Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.54
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.9. Building Construction (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.83	26.2	31.5	0.06	0.81	—	0.81	0.75	—	0.75	5,820
Onsite truck	0.02	0.41	0.32	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	65.8

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.59	1.91	< 0.005	0.05	—	0.05	0.05	—	0.05	353
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.97
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.29	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	58.5
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.66
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.11. Building Construction (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.73	25.4	31.4	0.06	0.74	—	0.74	0.68	—	0.68	5,819
Onsite truck	0.02	0.39	0.30	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	64.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.73	25.4	31.4	0.06	0.74	—	0.74	0.68	—	0.68	5,819
Onsite truck	0.02	0.41	0.31	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	64.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.95	18.2	22.4	0.04	0.53	—	0.53	0.49	—	0.49	4,157
Onsite truck	0.01	0.28	0.22	< 0.005	< 0.005	0.21	0.21	< 0.005	0.02	0.02	46.1
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.32	4.09	0.01	0.10	—	0.10	0.09	—	0.09	688
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	7.63
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.13. Building Construction (2028) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.62	24.5	31.3	0.06	0.66	—	0.66	0.61	—	0.61	5,821
Onsite truck	0.02	0.38	0.30	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	63.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.62	24.5	31.3	0.06	0.66	—	0.66	0.61	—	0.61	5,821
Onsite truck	0.02	0.40	0.31	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	63.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.88	17.5	22.4	0.04	0.47	—	0.47	0.44	—	0.44	4,169
Onsite truck	0.01	0.28	0.22	< 0.005	< 0.005	0.21	0.21	< 0.005	0.02	0.02	45.5
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	3.20	4.10	0.01	0.09	—	0.09	0.08	—	0.08	690

Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	7.54
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.15. Building Construction (2029) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.54	23.8	31.2	0.06	0.61	—	0.61	0.56	—	0.56	5,820

Onsite truck	0.02	0.37	0.29	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	62.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.54	23.8	31.2	0.06	0.61	—	0.61	0.56	—	0.56	5,820
Onsite truck	0.02	0.39	0.31	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	62.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.21	11.3	14.8	0.03	0.29	—	0.29	0.27	—	0.27	2,768
Onsite truck	0.01	0.18	0.14	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	29.6
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	2.06	2.70	0.01	0.05	—	0.05	0.05	—	0.05	458
Onsite truck	< 0.005	0.03	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	4.90
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.17. Paving (2029) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	8.19	12.4	0.02	0.23	—	0.23	0.21	—	0.21	1,899
Paving	0.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	7.75
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.95	2.95	< 0.005	0.05	—	0.05	0.05	—	0.05	453
Paving	0.06	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.86
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.36	0.54	< 0.005	0.01	—	0.01	0.01	—	0.01	75.0
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.19. Architectural Coating (2029) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	21.7	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	21.7	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	10.4	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.90	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2026	2/28/2026	5.00	42.0	—
Grading	Grading	3/1/2026	7/31/2026	5.00	110	—
Mat Foundation	Building Construction	8/1/2026	9/30/2026	5.00	43.0	—
Foundation	Building Construction	10/1/2026	11/30/2026	5.00	43.0	—
Building Construction	Building Construction	12/1/2026	8/31/2029	5.00	719	—
Paving	Paving	5/3/2029	8/31/2029	5.00	87.0	—
Architectural Coating	Architectural Coating	1/1/2029	8/31/2029	5.00	175	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Demolition	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Demolition	Excavators	Diesel	Average	1.00	8.00	158	0.38
Grading	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	1.00	8.00	367	0.29
Grading	Excavators	Diesel	Average	3.00	8.00	158	0.38

Grading	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Grading	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Grading	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Mat Foundation	Pumps	Diesel	Average	4.00	12.0	11.0	0.74
Mat Foundation	Plate Compactors	Diesel	Average	1.00	12.0	8.00	0.43
Mat Foundation	Rough Terrain Forklifts	Diesel	Average	1.00	12.0	96.0	0.40
Mat Foundation	Skid Steer Loaders	Diesel	Average	1.00	12.0	71.0	0.37
Mat Foundation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	12.0	84.0	0.37
Mat Foundation	Trenchers	Diesel	Average	2.00	12.0	40.0	0.50
Mat Foundation	Welders	Diesel	Average	1.00	12.0	46.0	0.45
Mat Foundation	Cement and Mortar Mixers	Diesel	Average	4.00	12.0	10.0	0.56
Foundation	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Foundation	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Foundation	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Foundation	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Foundation	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Foundation	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Foundation	Cement and Mortar Mixers	Diesel	Average	2.00	8.00	10.0	0.56
Foundation	Cranes	Electric	Average	1.00	8.00	367	0.29
Building Construction	Aerial Lifts	Diesel	Average	4.00	8.00	46.0	0.31

Building Construction	Air Compressors	Diesel	Average	4.00	8.00	37.0	0.48
Building Construction	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Building Construction	Cranes	Electric	Average	3.00	8.00	367	0.29
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Pumps	Diesel	Average	4.00	8.00	11.0	0.74
Building Construction	Rough Terrain Forklifts	Diesel	Average	3.00	8.00	96.0	0.40
Building Construction	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Paving	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2

Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	30.0	HHDT
Demolition	Onsite truck	25.0	0.30	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	30.0	HHDT
Grading	Onsite truck	155	0.30	HHDT
Mat Foundation	—	—	—	—
Mat Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Mat Foundation	Vendor	0.00	12.0	HHDT
Mat Foundation	Hauling	0.00	20.0	HHDT
Mat Foundation	Onsite truck	500	0.17	HHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	5.00	0.17	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	0.00	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT

Foundation	Onsite truck	50.0	0.15	HHDT,MHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	40.0	0.17	HHDT,MHDT

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%

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	693,852	231,284	253,585	81,023	23,585

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	161,833	—
Grading	0.00	210,000	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	9.02

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
General Office Building	0.00	0%
High Turnover (Sit Down Restaurant)	0.00	0%
Enclosed Parking with Elevator	8.05	100%
Other Non-Asphalt Surfaces	0.98	0%
Strip Mall	0.00	0%
Recreational Swimming Pool	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	2,540	440	0.05	0.01
2027	1,905	418	0.05	0.01
2028	1,905	397	0.05	0.01
2029	1,905	375	0.05	0.01

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.38	annual days of extreme heat
Extreme Precipitation	6.85	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

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

6.2. Initial Climate Risk Scores

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

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

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

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

6.3. Adjusted Climate Risk Scores

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

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	62.5
AQ-PM	77.2
AQ-DPM	99.3
Drinking Water	92.5
Lead Risk Housing	51.3
Pesticides	0.00
Toxic Releases	71.3
Traffic	83.5
Effect Indicators	—
CleanUp Sites	40.9
Groundwater	69.0
Haz Waste Facilities/Generators	72.0
Impaired Water Bodies	0.00

Solid Waste	0.00
Sensitive Population	—
Asthma	60.4
Cardio-vascular	46.6
Low Birth Weights	76.4
Socioeconomic Factor Indicators	—
Education	43.1
Housing	73.7
Linguistic	50.5
Poverty	54.0
Unemployment	44.4

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	25.07378417
Employed	76.27357885
Median HI	22.22507378
Education	—
Bachelor's or higher	76.90234826
High school enrollment	100
Preschool enrollment	56.34543821
Transportation	—
Auto Access	6.403182343
Active commuting	93.4813294
Social	—

2-parent households	5.787244963
Voting	12.72937251
Neighborhood	—
Alcohol availability	10.59925574
Park access	19.96663673
Retail density	98.26767612
Supermarket access	94.25125112
Tree canopy	16.82278968
Housing	—
Homeownership	8.122674195
Housing habitability	22.41755422
Low-inc homeowner severe housing cost burden	34.83895804
Low-inc renter severe housing cost burden	38.72706275
Uncrowded housing	27.38354934
Health Outcomes	—
Insured adults	27.96099063
Arthritis	70.7
Asthma ER Admissions	17.5
High Blood Pressure	44.4
Cancer (excluding skin)	66.1
Asthma	37.3
Coronary Heart Disease	40.3
Chronic Obstructive Pulmonary Disease	31.1
Diagnosed Diabetes	45.6
Life Expectancy at Birth	35.9
Cognitively Disabled	52.2
Physically Disabled	63.7

Heart Attack ER Admissions	14.1
Mental Health Not Good	30.2
Chronic Kidney Disease	55.3
Obesity	27.3
Pedestrian Injuries	96.0
Physical Health Not Good	30.9
Stroke	34.3
Health Risk Behaviors	—
Binge Drinking	35.4
Current Smoker	24.8
No Leisure Time for Physical Activity	43.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	39.2
Elderly	87.4
English Speaking	19.2
Foreign-born	76.9
Outdoor Workers	28.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	2.9
Traffic Density	95.4
Traffic Access	87.4
Other Indices	—
Hardship	52.1
Other Decision Support	—
2016 Voting	11.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	77.0
Healthy Places Index Score for Project Location (b)	35.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Site Specific
Construction: Construction Phases	Site Specific - see construction assumptions
Construction: Off-Road Equipment	Site Specific - see construction assumptions
Construction: Trips and VMT	Site Specific - see construction assumptions
Construction: On-Road Fugitive Dust	15 MPH onsite vehicle speed
Construction: Electricity	Carbon Intensity for construction years

Appendix B

Carcinogenic and Non-Carcinogenic Risk Calculations

6000 Hollywood

Cancer Risk Calculations

Residential Receptor - 30 year Exposure Duration

Diesel Particulate Matter Emission Rate Calculation / Scaler	Construction						Operations		
Year -->	**2026**	**2026**	**2027**	**2028**	**2028**	**2029**	**2029-2039**	**2040-2056**	
Average Annual Emission Rate (g/s)	1.000	1.000	1.000	1.000	1.000	1.000	1.0000	1.0000	
Scaler Concentration (ug/m3)	0.066	0.066	0.066	0.066	0.066	0.066	0.0054	0.0054	
Diesel Particulate Concentration (ug/m3)	0.066	0.066	0.066	0.066	0.066	0.066	5.40E-03	5.40E-03	
Cancer Risk Calculations - DPM									
	Age								
Parameter	**3rd Trimester**	**0 < 2**	**0 < 2**	**0 < 2**	**2<16**	**2<16**	**2<16**	**16-30**	**Total**
Breathing Rate	361	1090	1090	1090	861	861	861	335	
Exposure Frequency (EF)	350	350	350	350	350	350	350	350	
Exposure Duration (ED) (years)	**0.25**	**0.75**	**1**	**0.25**	**0.75**	**0.75**	**10.25**	**16**	**30.00**
AT	25550	25550	25550	25550	25550	25550	25550	25550	
Fraction of Time at Home (FAH)	1	0.85	0.85	0.85	0.72	0.72	0.72	0.73	
70-Year (Lifetime) Concentration (ug/m3)	6.65E-02	6.65E-02	6.65E-02	6.65E-02	6.65E-02	6.65E-02	5.40E-03	5.40E-03	
70-Year (Lifetime) Dose (mg/kg-d)	2.30E-05	6.95E-05	6.95E-05	6.95E-05	5.49E-05	5.49E-05	4.46E-06	1.73E-06	
Carcinogen Potency (CPF) $(mg/kg\text{-}d)^{-1}$									
- Diesel Particulate Matter	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Cancer Risk	9.04E-08	6.96E-07	9.28E-07	2.32E-07	4.66E-07	4.66E-07	5.17E-07	3.18E-07	3.71E-06
Risk per Million (DPM)									**3.71**

Chronic Risk Calculations - DPM

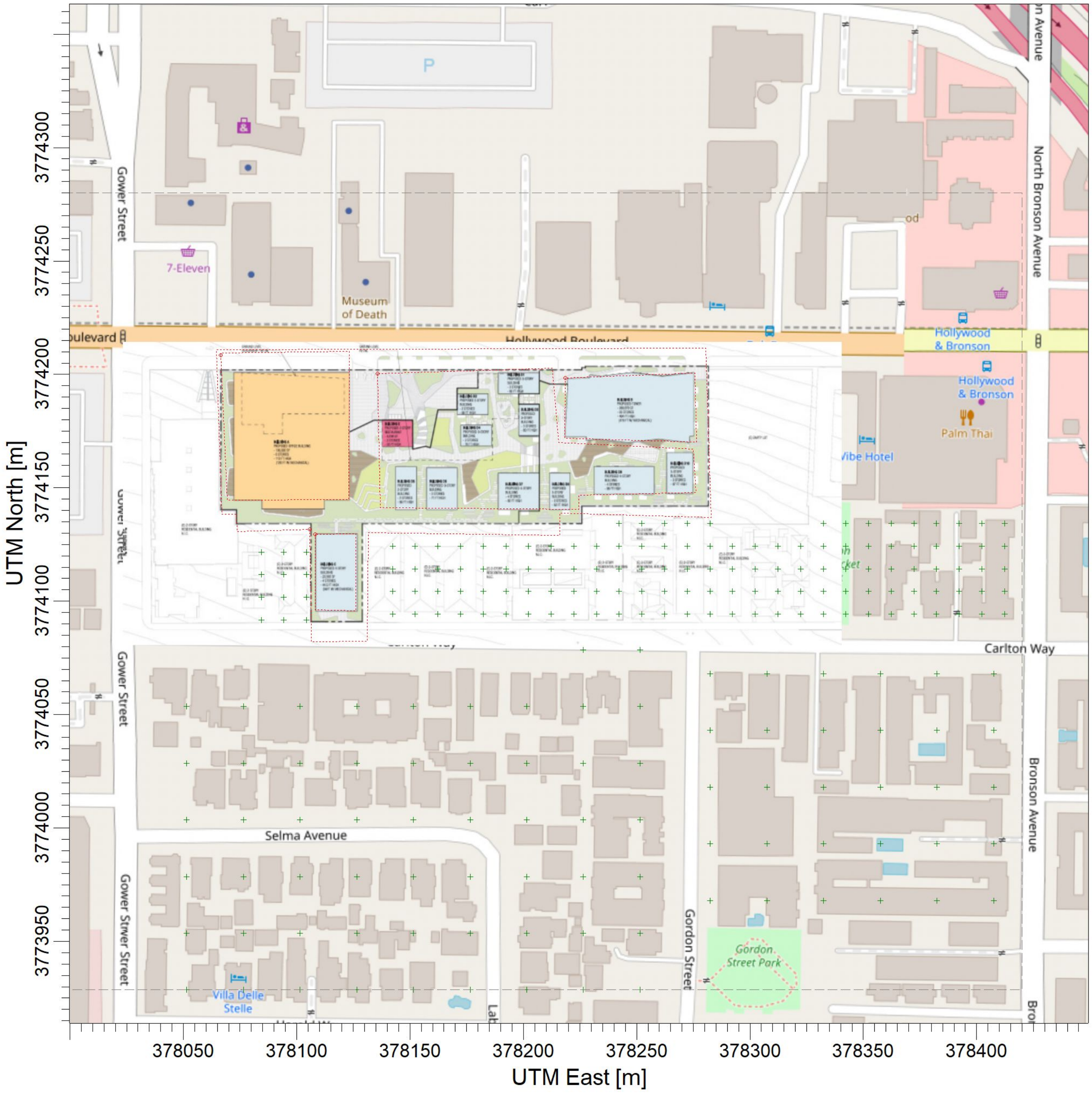
Receptor	Annual Concentration (ug/m3)	Chronic Inhalation REL (ug/m3)	Chronic Risk (HI)
Residential	6.6E-02	5	1.3E-02

Appendix C

AERMOD Source Receptor Configuration

PROJECT TITLE:

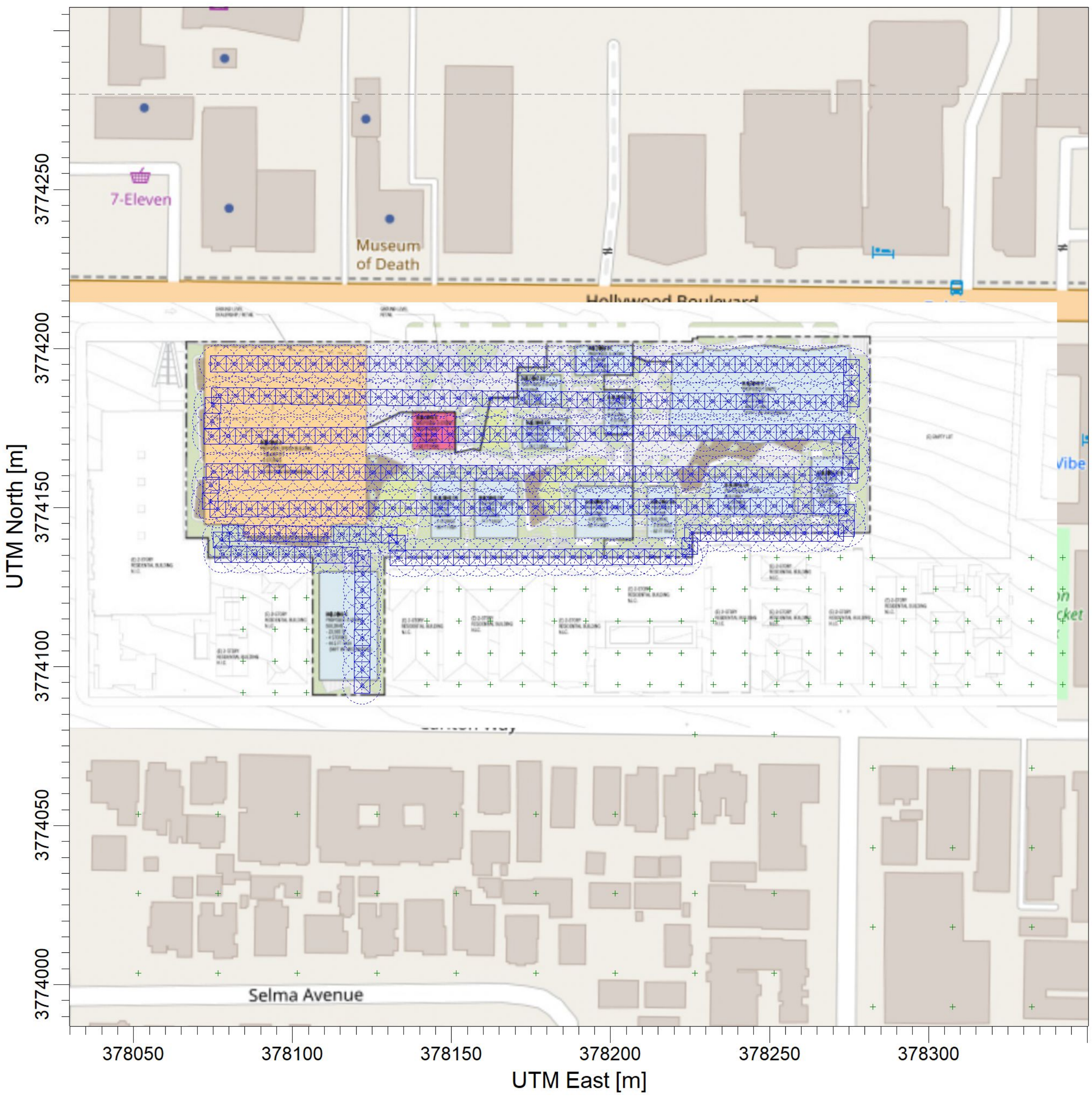
6000 Hollywood - Construction



COMMENTS:	SOURCES:	COMPANY NAME:	
6000 Hollywood Source Receptor Diagram - Construction	**7**		
	RECEPTORS: **224**	MODELER:	
		SCALE: 1:2,827 0 ▬ 0.1 km	
		DATE: **2/28/2025**	PROJECT NO.:

PROJECT TITLE:

6000 Hollywood - Operations



COMMENTS: 6000 Hollywood Source Receptor Diagram - Operations	SOURCES: **7**	COMPANY NAME:	
	RECEPTORS: **224**	MODELER:	
		SCALE: 1:2,015 0 ▬ 0.05 km	
		DATE: **2/28/2025**	PROJECT NO.: