Appendix FSEIR-5

Health Risk Assessment

HEALTH RISK ASSESSMENT

Promenade 2035

Prepared by:

Eyestone Environmental, LLC

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TABLE OF CONTENTS

1.0 Executive Summary

1.1 Findings

This report provides an analysis of potential health risk impacts related to the proposed redevelopment of the Westfield Promenade Shopping Center (Project) located within the Warner Center 2035 Specific Plan (Warner Center Plan) in the City of Los Angeles, California. The analyses evaluated the incremental change in health risk concentration exposure from diesel exhaust/diesel particulate matter (DPM) emitted by heavy-duty construction equipment and on-site trucks during Project construction. The findings of the analysis are as follows:

- For carcinogenic exposures, the increase in risk is calculated to be less than the applicable threshold of 10 in one million for sensitive receptors in close proximity as well as on the Project site, resulting in a less than significant impact.
- For chronic non-carcinogenic exposures, the increase in the respiratory hazard index was estimated to be less than the applicable threshold of one for sensitive receptors in close proximity as well as on the Project site, resulting in a less than significant impact.

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2.0 Introduction

The Office of Environmental Health Hazard Assessment (OEHHA) adopted a new version of the Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (Guidance Manual) in March of 2015.[1] 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. CARB acknowledges that the Guidance Manual does not include guidance for CEQA and that it would be "handled by individual [Air Pollution Control] Districts".[2]

The intent in developing the Guidance Manual was to provide health risk assessment (HRA) procedures for use in the Air Toxics Hot Spots Program or for the permitting of new or modified stationary sources. Air districts are to determine which facilities will prepare an HRA based on a prioritization process. The Guidance Manual provides recommendations related to cancer risk evaluation of short-term projects. As discussed in Section 8.2.10 of the 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 would not be applicable to the Project. The Guidance Manual does not provide specific recommendations about activities that do not fall under the Hot Spots program or require a SCAQMD permit

Eyestone Environmental, LLC (Eyestone) coordinated with the SCAQMD to determine if SCAQMD adopted the new version of the Guidance Manual for use in analysis of construction health risk impacts under CEQA. According to Lijin Sun, SCAQMD CEQA Program Supervisor, SCAQMD is currently evaluating the new Guidance Manual and they

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[1] *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.*

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

have not developed any recommendations on its use for CEQA analyses for potential construction impacts.[3]

As acknowledged by the SCAQMD, the revised Guidance Manual is only being used where SCAQMD is the lead agency (e.g., for the adoption of rules, regulations or plans) or in determining operational health impacts for permitting applications under SCAQMD Rule 1401 (New Source Review of Toxic Air Contaminants). Examples of projects subject to SCAQMD Rule 1401 include power plants, refineries, chrome plating facilities, and gasoline stations. The City of Los Angeles is the lead agency and proposed construction activities would not be subject to SCAQMD Rule 1401. As such, the methodology utilized in this HRA remains consistent with currently available SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (*SCAQMD Guidance*)*.[4]

Per SCAQMD's recommendation, consultation with the lead agency was conducted. The *L.A. City CEQA Thresholds Guide* (Thresholds Guide) states that "impacts from toxic air contaminants can occur during either the construction or operational phases of a project. During certain construction activities, potential releases of toxic air contaminants could occur during site remediation activities or during building demolition. Toxic air contaminants may also be released during industrial or manufacturing processes, or other activities that involve the use, storage, processing, or disposal of toxic materials."[5] The Thresholds Guide does not specifically recommend an HRA for short-term DPM emissions from construction activities. The Thresholds Guide also sets forth the following factors for consideration on a case-by-case basis in making a determination of significance with regard to toxic air contaminants: the regulatory framework for the toxic material(s) and process(es) involved; the proximity of the toxic air contaminants to sensitive receptors; the quantity, volume, and toxicity of the contaminants expected to be emitted; the likelihood and potential level of exposure; and the degree to which project design will reduce the risk of exposure. Based on this information, the methodology utilized in the Draft EIR remains consistent with City of Los Angeles guidance for preparation of HRAs.

OEHHA's new Guidance Manual provides Age Sensitivity Factors (ASFs) to account for potential increased sensitivity of early-in-life exposure to carcinogens. A review of relevant guidance was conducted to determine applicability of the use of early life exposure adjustments to identified carcinogens. For risk assessments conducted under the auspices of The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly,

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[3] *Lijin Sun., SCAQMD CEQA Program Supervisor, Personal Communication via email, May 16, 2018.*

[4] *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.*

[5] *City of Los Angeles, CEQA Thresholds Guide, 2006, p. B.3-2.*

Statutes of 1987; Health and Safety Code Section 44300 et seq.) a weighting factor is applied to all carcinogens regardless of purported mechanism of action. 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 impacts. For this assessment, the HRA relied upon United States Environmental Protection Agency (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." The USEPA has identified 19 compounds that elicit a mutagenic mode of action for carcinogenesis. For DPM, 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. Therefore, early life exposure adjustments were not considered in this HRA.

As SCAQMD and the City of Los Angeles have not provided guidance on use of the new Guidance Manual at this time, any additional analysis of short-term construction health risk impacts using this guidance would not be warranted.

Although a construction HRA is not required per the Thresholds Guide, for informational purposes only, an HRA has been prepared in accordance with current SCAQMD Guidance in response to public comments and to provide the City with additional supporting evidence that the Project would result in a less than significant health risk impact from construction of the Project.

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3.0 Health Risk Assessment

This section of the HRA includes a discussion of the assessment process, source identification and characterization, identification of chemicals of concern, risk characterization, and conclusions. As discussed above in Section 2.0, the HRA was conducted in accordance with SCAQMD Guidance and Final-Localized Significance Threshold Methodology (LST Guidelines). [6,7] DPM modeled concentrations were used to calculate cancer risk and chronic hazard index at each relevant receptor. The acute hazard index was not quantified since an inhalation Reference Exposure Level (REL) has not been determined by the OEHHA for DPM.

3.1 The Assessment Process

The risk assessment process is typically described as consisting of four basic steps: (1) hazard identification; (2) exposure assessment; (3) dose-response assessment; and (4) risk characterization. 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. 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.

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[6] *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.*

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

3.2 Source Identification and Characterization

3.2.1 Source Identification

As indicated above, the primary source of potential air toxics associated with proposed Project construction is DPM from on-site heavy-duty construction equipment. The 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.[8] While Project construction would not represent a long-term source of DPM emissions, the SCAQMD Guidance was used for purposes of modeling parameters and assumptions.

3.2.2 Source Characterization

As described in detail in Section II, Project Description, of this Draft EIR, Project construction is anticipated to occur in multiple phases over 15 years (2019-2033). Construction of the Project would commence with demolition of the existing shopping center with the exception of a few retail buildings. After demolition is completed, development of the Project would start in the Northeast area of the Project site and proceed in a counterclockwise order through the remainder of the Project site.

For the purpose of providing an extremely conservative analysis of potential construction impacts for the Draft Supplemental EIR, construction assumptions were developed for the maximum potential overlap of construction phases (the "Overlapping Construction Plan") as described in more detail in Draft Supplemental EIR Appendix C-2. The Overlapping Construction Plan assumes that the Northeast, Northwest, and Southwest areas of the Project Site would be constructed as close in time as feasible, to provide a peak scenario of potential construction impacts. The Overlapping Construction Plan is utilized in the Draft Supplemental EIR for all construction impact analyses where it would result in the greatest potential for environmental impacts. Thus, while the order of construction of Project phases may change, with some phases overlapping, any future potential buildout will be within the envelope of impacts analyzed by the Overlapping Construction Plan. If the Project were to be constructed in multiple phases over a period of 15 years, then construction emissions would decrease in comparison to the Overlapping Construction Plan since emission factors for heavy-duty construction equipment and on-road vehicles decrease over time (e.g., more stringent emission limits and improved technologies).

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

The Northeast area would be constructed with residential, retail and office uses, parking structures and a portion of Promenade Square. The Northwest area would also be constructed with residential, retail, office, hotel and parking uses. The Southwest area would contain the Entertainment and Sports Center, office, retail and parking uses. Finally, the Southeast area would be constructed with the remaining residential, hotel, office and retail uses with parking structures.

During site grading and excavation activities, some soil would be balanced on-site to serve as fill material. It is estimated that approximately 844,000 cubic yards (cy) of dirt would be exported from the Project site over the entire construction duration. However, if excavated soil is not suitable for use as fill material, an additional 344,000 cubic yards of soil import would be required and a total of 1,430,000 cy of soil would be exported. As a conservative approach, two construction scenarios were analyzed. One scenario (No Import Scenario) was analyzed assuming export of 844,000 cy of soil and no soil import. The other construction scenario (Import Scenario) analyzed 1,430,000 cy of export and 344,000 cy of import.

Total DPM emissions over the duration of Project construction were calculated using the SCAQMD recommended California Emissions Estimator Model (CalEEMod) version 2016.3.1 and consistent with the methodology for calculating criteria pollutant emissions provided in Section IV.B, Air Quality, of the Draft EIR. The calculations of the emissions generated during Project construction activities reflect the types and quantities of construction equipment and haul trucks that would be used to complete the proposed construction activities. As the assumptions used in the air quality analysis were developed to characterize a worst-case peak day of construction by phase, equipment usage assumptions were modified to reflect average daily use. As an example, the heavy-duty construction equipment mix provided in the air quality analysis for the building foundation (subterranean parking structure) reflects all equipment needed for the largest concrete pour day. Thus, average daily DPM emissions from building foundation would be substantially less since concrete pours would not occur every day during that phase.

Construction emissions calculations also took into account mitigation measures set forth in the Warner Center Plan EIR. As discussed in Section IV.B, Air Quality, of the Draft EIR, Mitigation Measure AQ-1 would require use of Model Year 2010 and newer trucks for soil import/export and use of EPA Tier 4 emissions compliant construction equipment. The following mitigation measure would serve to reduce DPM emissions during Project construction activities and was incorporated into the HRA.

> **Warner Center Plan Mitigation Measure AQ-1:** The City shall require that all projects use soil binders on soils exposed for extended periods of time (more than two weeks) to reduce fugitive dust and the speed on unpaved haul roads within the Project Site shall be limited to 15 miles per hour. In addition, the City shall

require that projects be required to include the following measures as applicable and feasible:

i) Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.

ii) Provide dedicated turn lanes for movement of construction trucks and equipment on-and off-site.

iii) Reroute construction trucks away from congested streets or sensitive receptor areas.

iv) Appoint a construction relations officer to act as a community liaison concerning on-site construction activity, including resolution of issues related to PM_{10} generation.

v) Improve traffic flow by signal synchronization, and ensure that all vehicles and equipment will be properly tuned and maintained according to manufacturers' specifications.

vi) Use coatings and solvents with a VOC content lower than that required under AQMD Rule 1113.

vii) Construct or build with materials that do not require painting.

viii) Require the use of pre-painted construction materials.

ix) Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export).

x) During project construction, all internal combustion engines/construction, equipment operating on the project site shall meet the following:

- Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet or exceed the Tier 4 emission standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.
- Encourage construction contractors to apply for AQMD "SOON" funds. Incentives could be provided for those construction contractors who apply for AQMD "SOON"

funds. The "SOON" program provides funds to accelerate clean up of off-road diesel vehicles, such as heavy-duty construction equipment. More information on this program can be found at the following website: www.aqmd.gov/tao/Implementation/SOONProgram.htm.

xi) Other measures as applicable on a project by project basis and as may be recommended by SCAQMD on their web site or elsewhere: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html.

Emissions calculations, assumptions and modeling outputs are presented in Attachment A.

3.4 Identification of Chemicals of Concern

DPM was evaluated for potential health effects in two categories, carcinogenic and non-carcinogenic. Most regulatory agencies consider carcinogens to pose a risk of cancer at all exposure levels (i.e., a "no-threshold" assumption); that is, any increase in dose is assumed to be associated with an increase in the probability of developing cancer. In contrast, non-carcinogens generally are thought to produce adverse health effects only when some minimum exposure level is reached (i.e., a threshold).

CARB currently allows the use of DPM as a surrogate to calculate the cancer and chronic non-cancer impacts associated with diesel exhaust. This health risk analysis uses these toxicity values for DPM.

3.5 Exposure Quantification

Consistent with SCAQMD's Localized Significance Threshold (LST) Methodology, this HRA used USEPA's Regulatory Model AERMOD to assess the downwind extent of DPM concentrations from proposed construction activities. AEROMOD 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 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 were treated as a set of side-by-side elevated volume sources. The release height was assumed to be five meters. This represents the mid-range of the expected plume rise from frequently used construction equipment during daytime atmospheric conditions. All construction exhaust emissions were assumed to take place over the eight-hour period between 8 a.m. to 4 p.m.

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 U.S. Environmental Protection Agency 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 Reseda monitoring station (Source Receptor Area 6) was used to represent local weather conditions and prevailing winds. The meteorological monitoring station is located at 18330 Gault Street in Reseda, approximately four miles east of the Project site.

A fenceline grid was used to represent adjacent and nearby sensitive land uses. Receptors were spaced 20 meters apart along the fenceline and at the following downwind distances from the proposed project boundary: 25, 50, 75 and 100 meters.

Potential localized impacts to proposed residential uses on the Project Site were also evaluated as phases of construction could be completed and operational while construction of other phases would be underway. As an example, residential uses within Northeast could be operational while construction is still underway within Northwest, Southwest, and Southeast areas. A uniform Cartesian grid was included to represent on-site sensitive receptors (Northeast area) while other phases are being constructed. All receptors were placed at ground level (0 meters) consistent with SCAQMD AERMOD modeling guidance. Elevations for both sources and receptors were included using the AERMOD terrain processor with a geocoded aerial.

A graphical representation of the source-receptor grid network is presented in Attachment B.

3.5 Risk Characterization

3.5.1 Carcinogenic Chemical Risk

As discussed above, carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below which there are no risks). Any exposure, therefore, will have some associated risk. Health risks associated with exposure to carcinogenic compounds at sensitive land uses in close proximity to the proposed 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 ($\mu g/m^3$) over a 70 year lifetime.

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

$Risk_i = C_i \times CP_i \times DBR \times EVF$

Where:

$Risk_i$ = Lifetime Excess Cancer Risk from exposure to $chemical_i$
C_i = Representative Air Concentration for $chemical_i$ ($\mu g/m^3$)
CP_i = Cancer $Potency_i$ $(mg/kg\text{-}day)^{-1}$
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 DPM emissions is calculated by summing the chemical-specific excess cancer risks.

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 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 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

3.6 Conclusions

The results from the health risk calculations provide an estimate of the potential risks and hazards to individuals through inhalation of ambient air as discussed above. 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 Attachment C, the results of the HRA yields a maximum off-site individual cancer risk of 0.21 in a million at residences located approximately 50 meters northeast of the Project site. The maximum off-site chronic risk impact of less than 0.01 also occurs at residences northeast of the Project site. With regard to on-site impacts, the maximum cancer risk of 0.93 in a million would occur at the proposed residential uses located in the Northeast area of the Project site. The maximum on-site chronic risk impact of less than 0.01 would also occur at residential uses in the Northeast area.

As the Project 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.

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 following analysis are designed to produce conservative (high) estimates of the risk posed by DPM, due to the following factors:

- As a conservative measure, the 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 $\mu g/m^3$.[9]

- 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.[4] 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

[9] *South Coast Air Quality Management District (SCAQMD), 2002. Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions.*

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 any undisclosed impacts to human health. Concentrations reported in this report represent a worst-case scenario that is likely an over estimation of actual pollutant concentrations.

Attachment A

Emissions Calculations

Westfield Promenade
Construction Health Risk Assessment
Diesel Particulate Emissions

Construction DPM Emissions Calculations (Total over Construction Duration)

Scenario	Start Date	End Date	Total Number of Construction Days	Mitigated Total On-Site DPM Emissions (total tons)	Scalar	Mitigated Average Daily DPM Emissions (lbs/day)	Model Input (grams per second)
With Import (Off-Site)							
NE, NW, SW	1/1/2019	11/30/2022	1225	0.18	0.800	0.23	0.00361
SE	1/1/2031	11/30/2033	912	0.08	0.800	0.15	0.00231
No Import (Off-Site)							
NE, NW, SW	1/1/2019	8/31/2022	1147	0.14	0.800	0.19	0.00307
SE	1/1/2031	9/30/2033	860	0.08	0.800	0.14	0.00224
With Import (On-Site NE Operational)							
NW, SW	1/1/2019	11/30/2022	1225	0.12	0.800	0.16	0.00247
SE	1/1/2031	11/30/2033	912	0.08	0.800	0.15	0.00231
No Import (On-Site NE Operational)							
NW, SW	1/1/2019	12/31/2021	939	0.09	0.800	0.15	0.00241
SE	1/1/2031	9/30/2033	860	0.08	0.800	0.14	0.00224

Notes:
Please see attached CalEEMod output file.

Mitigated emissions account for compliance with Mitigation Measure B-4 of the Final EIR.

Scalar factor assumes that average daily emissions would be approximately 80% of maximum day.

Model Input (grams per second) are calculated to reflect only construction days. Since the model calculates emissions for each meteorological day, the average daily emissions were divided by the total number of calendar days. Emission Rate/8 hours per day / 60 minutes per hour / 60 seconds per minute x 453.54 grams per pound.

Promenade Max Construction Emissions with No Import Onsite for DPM HRA

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	629.00	1000sqft	14.44	629,000.00	0
Enclosed Parking with Elevator	2,380.00	Space	21.42	952,000.00	0
Unenclosed Parking with Elevator	3,360.00	Space	30.24	1,344,000.00	0
Hotel	572.00	Room	19.07	469,000.00	0
Movie Theater (No Matinee)	15,000.00	Seat	7.75	320,000.00	0
Apartments Mid Rise	1,432.00	Dwelling Unit	37.68	1,609,000.00	4096
Strip Mall	244.00	1000sqft	5.60	244,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2033
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Specific

Construction Phase - Site Specific

Off-road Equipment -

Off-road Equipment - Site Specific (Included in Building Construction)

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - site specific

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Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Trips and VMT - Site Specific

On-road Fugitive Dust - Site Specific

Demolition -

Grading - DPM HRA Run

Architectural Coating -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation - SP

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	31.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	31.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	35.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	24.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	40.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	48.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	19.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	31.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	30.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	20.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	41.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	26.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	310.00	36.00
tblConstructionPhase	NumDays	310.00	99.00
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tblConstructionPhase	NumDays	120.00	108.00
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tblConstructionPhase	NumDaysWeek	5.00	6.00
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tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
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tblLandUse	LandUseSquareFeet	1,432,000.00	1,609,000.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00

tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
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tblTripsAndVMT	WorkerTripNumber	70.00	0.00
tblTripsAndVMT	WorkerTripNumber	2,606.00	0.00
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tblTripsAndVMT	WorkerTripNumber	2,606.00	0.00
tblTripsAndVMT	WorkerTripNumber	43.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019						0.8256	1.4908		0.7712	1.1290						
2020						1.1937	1.5100		1.1365	1.3041						
2021						0.7786	0.7838		0.7456	0.7472						
2022						0.1432	0.1441		0.1370	0.1373						
2031						0.1671	1.6190		0.1670	0.9533						
2032						0.0959	0.1004		0.0959	0.0973						

2033						0.0693	0.0732		0.0693	0.0705						
Maximum						**1.1937**	**1.6190**		**1.1365**	**1.3041**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019						0.0388	0.3000		0.0388	0.1788						
2020						0.0545	0.1817		0.0544	0.1210						
2021						0.0381	0.0433		0.0380	0.0396						
2022						8.2000e-003	9.1200e-003		8.1900e-003	8.4800e-003						
2031						0.0382	0.6061		0.0382	0.3453						
2032						0.0218	0.0264		0.0218	0.0232						
2033						0.0165	0.0203		0.0165	0.0176						
Maximum						**0.0545**	**0.6061**		**0.0544**	**0.3453**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**93.40**	**79.26**	**0.00**	**93.09**	**83.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition (Less SE and NW)	Demolition	1/1/2019	5/31/2019	6	130	
2	Grading (NE)	Grading	6/1/2019	7/7/2019	6	31	
3	Foundation (NE-A)	Site Preparation	7/8/2019	11/30/2019	5	105	
4	Grading (SW)	Grading	7/8/2019	11/19/2019	6	116	
5	Demolition (NW)	Demolition	11/1/2019	11/19/2019	6	16	
6	Foundation (SW)	Site Preparation	11/20/2019	4/15/2020	5	106	
7	Grading (NW) - 2019	Grading	11/20/2019	12/31/2019	6	36	
8	Building Construction (NE-A)	Building Construction	12/1/2019	12/31/2020	5	284	
9	Grading (NW) - 2020	Grading	1/1/2020	4/24/2020	6	99	
10	Architectural Coating	Architectural Coating	1/1/2020	12/30/2021	5	522	
11	Building Construction (SW)	Building Construction	4/16/2020	3/31/2021	5	250	
12	Foundation (NW)	Site Preparation	4/25/2020	8/31/2020	5	91	
13	Building Construction (NW)	Building Construction	9/1/2020	11/30/2021	5	326	
14	Paving/Landscape (NE-A)	Paving	1/1/2021	1/31/2021	5	21	
15	Foundation (NE-B)	Site Preparation	2/1/2021	6/30/2021	5	108	
16	Paving/Landscape (SW)	Paving	4/1/2021	4/30/2021	5	22	
17	Building Construction (NE-B)	Building Construction	7/1/2021	7/31/2022	5	282	

18	Paving/Landscape (NW)	Paving	12/1/2021	12/31/2021	5	23	
19	Paving/Landscape (NE-B)	Paving	8/1/2022	8/31/2022	5	23	
20	Demolition (SE)	Demolition	1/1/2031	1/31/2031	6	27	
21	Grading (SE)	Grading	2/1/2031	11/3/2031	6	236	
22	Foundation (SE)	Site Preparation	11/4/2031	3/31/2032	5	107	
23	Building Construction (SE)	Building Construction	4/1/2032	8/31/2033	5	370	
24	Paving/Landscape (SE)	Paving	9/1/2033	9/30/2033	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 51.66

Residential Indoor: 3,258,225; Residential Outdoor: 1,086,075; Non-Residential Indoor: 2,493,000; Non-Residential Outdoor: 831,000;

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition (Less SE and NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition (Less SE and NW)	Cranes	2	8.00	231	0.29
Demolition (Less SE and NW)	Excavators	3	8.00	158	0.38
Demolition (Less SE and NW)	Rubber Tired Dozers	0	8.00	247	0.40
Demolition (Less SE and NW)	Rubber Tired Loaders	3	8.00	203	0.36
Demolition (Less SE and NW)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading (NE)	Excavators	0	8.00	158	0.38
Grading (NE)	Graders	1	8.00	187	0.41
Grading (NE)	Rollers	2	8.00	80	0.38
Grading (NE)	Rubber Tired Dozers	2	8.00	247	0.40
Grading (NE)	Rubber Tired Loaders	2	8.00	203	0.36
Grading (NE)	Scrapers	6	8.00	367	0.48
Grading (NE)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Foundation (NE-A)	Concrete/Industrial Saws	2	8.00	81	0.73
Foundation (NE-A)	Forklifts	3	8.00	89	0.20
Foundation (NE-A)	Plate Compactors	6	8.00	8	0.43
Foundation (NE-A)	Pumps	3	8.00	84	0.74
Foundation (NE-A)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (NE-A)	Rubber Tired Loaders	2	8.00	203	0.36
Foundation (NE-A)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (NE-A)	Trenchers	1	8.00	78	0.50
Foundation (NE-A)	Welders	2	8.00	46	0.45
Grading (SW)	Bore/Drill Rigs	2	8.00	221	0.50
Grading (SW)	Cranes	2	8.00	231	0.29
Grading (SW)	Excavators	2	8.00	158	0.38
Grading (SW)	Graders	0	8.00	187	0.41
Grading (SW)	Rubber Tired Dozers	1	8.00	247	0.40
Grading (SW)	Rubber Tired Loaders	2	8.00	203	0.36
Grading (SW)	Scrapers	6	8.00	367	0.48
Grading (SW)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition (NW)	Excavators	0	8.00	158	0.38
Demolition (NW)	Rubber Tired Dozers	0	8.00	247	0.40
Demolition (NW)	Rubber Tired Loaders	3	8.00	203	0.36
Demolition (NW)	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Foundation (SW)	Concrete/Industrial Saws	2	8.00	81	0.73
Foundation (SW)	Excavators	1	8.00	158	0.38
Foundation (SW)	Forklifts	3	8.00	89	0.20
Foundation (SW)	Plate Compactors	6	8.00	8	0.43
Foundation (SW)	Pumps	3	8.00	84	0.74
Foundation (SW)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (SW)	Rubber Tired Loaders	2	8.00	203	0.36
Foundation (SW)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (SW)	Trenchers	1	8.00	78	0.50
Foundation (SW)	Welders	2	8.00	46	0.45
Grading (NW) - 2019	Bore/Drill Rigs	2	8.00	221	0.50
Grading (NW) - 2019	Cranes	2	8.00	231	0.29
Grading (NW) - 2019	Excavators	2	8.00	158	0.38
Grading (NW) - 2019	Graders	0	8.00	187	0.41
Grading (NW) - 2019	Rubber Tired Dozers	1	8.00	247	0.40
Grading (NW) - 2019	Rubber Tired Loaders	2	8.00	203	0.36
Grading (NW) - 2019	Scrapers	6	8.00	367	0.48
Grading (NW) - 2019	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction (NE-A)	Aerial Lifts	5	8.00	63	0.31
Building Construction (NE-A)	Air Compressors	5	8.00	78	0.48
Building Construction (NE-A)	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction (NE-A)	Cranes	2	8.00	231	0.29
Building Construction (NE-A)	Forklifts	3	8.00	89	0.20
Building Construction (NE-A)	Generator Sets	0	8.00	84	0.74
Building Construction (NE-A)	Plate Compactors	2	8.00	8	0.43
Building Construction (NE-A)	Skid Steer Loaders	1	8.00	65	0.37
Building Construction (NE-A)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction (NE-A)	Welders	2	8.00	46	0.45
Grading (NW) - 2020	Bore/Drill Rigs	2	8.00	221	0.50
Grading (NW) - 2020	Cranes	2	8.00	231	0.29
Grading (NW) - 2020	Excavators	2	8.00	158	0.38
Grading (NW) - 2020	Graders	0	8.00	187	0.41
Grading (NW) - 2020	Rubber Tired Dozers	1	8.00	247	0.40
Grading (NW) - 2020	Rubber Tired Loaders	2	8.00	203	0.36
Grading (NW) - 2020	Scrapers	6	8.00	367	0.48
Grading (NW) - 2020	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	0	6.00	78	0.48
Building Construction (SW)	Aerial Lifts	5	8.00	63	0.31
Building Construction (SW)	Air Compressors	5	8.00	78	0.48
Building Construction (SW)	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction (SW)	Cranes	2	8.00	231	0.29
Building Construction (SW)	Forklifts	3	8.00	89	0.20
Building Construction (SW)	Generator Sets	0	8.00	84	0.74
Building Construction (SW)	Plate Compactors	2	8.00	8	0.43
Building Construction (SW)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (SW)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction (SW)	Welders	2	8.00	46	0.45
Foundation (NW)	Concrete/Industrial Saws	3	8.00	81	0.73
Foundation (NW)	Excavators	0	8.00	158	0.38
Foundation (NW)	Forklifts	5	8.00	89	0.20

Foundation (NW)	Plate Compactors	8	8.00	8	0.43
Foundation (NW)	Pumps	5	8.00	84	0.74
Foundation (NW)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (NW)	Rubber Tired Loaders	3	8.00	203	0.36
Foundation (NW)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (NW)	Trenchers	1	8.00	78	0.50
Foundation (NW)	Welders	3	8.00	46	0.45
Building Construction (NW)	Aerial Lifts	8	8.00	63	0.31
Building Construction (NW)	Air Compressors	8	8.00	78	0.48
Building Construction (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction (NW)	Cranes	4	8.00	231	0.29
Building Construction (NW)	Forklifts	6	8.00	89	0.20
Building Construction (NW)	Generator Sets	0	8.00	84	0.74
Building Construction (NW)	Plate Compactors	4	8.00	8	0.43
Building Construction (NW)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (NW)	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Building Construction (NW)	Welders	4	8.00	46	0.45
Paving/Landscape (NE-A)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (NE-A)	Pavers	1	8.00	130	0.42
Paving/Landscape (NE-A)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (NE-A)	Rollers	1	8.00	80	0.38
Paving/Landscape (NE-A)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (NE-A)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Foundation (NE-B)	Concrete/Industrial Saws	2	8.00	81	0.73
Foundation (NE-B)	Excavators	0	8.00	158	0.38
Foundation (NE-B)	Forklifts	3	8.00	89	0.20
Foundation (NE-B)	Plate Compactors	6	8.00	8	0.43
Foundation (NE-B)	Pumps	3	8.00	84	0.74
Foundation (NE-B)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (NE-B)	Rubber Tired Loaders	2	8.00	203	0.36
Foundation (NE-B)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (NE-B)	Trenchers	1	8.00	78	0.50
Foundation (NE-B)	Welders	2	8.00	46	0.45
Paving/Landscape (SW)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (SW)	Pavers	1	8.00	130	0.42
Paving/Landscape (SW)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (SW)	Rollers	1	8.00	80	0.38
Paving/Landscape (SW)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (SW)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving/Landscape (SW)	Trenchers	1	8.00	78	0.50
Building Construction (NE-B)	Aerial Lifts	5	8.00	63	0.31
Building Construction (NE-B)	Air Compressors	5	8.00	78	0.48
Building Construction (NE-B)	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction (NE-B)	Cranes	2	8.00	231	0.29
Building Construction (NE-B)	Forklifts	3	8.00	89	0.20
Building Construction (NE-B)	Generator Sets	0	8.00	84	0.74
Building Construction (NE-B)	Plate Compactors	2	8.00	8	0.43
Building Construction (NE-B)	Skid Steer Loaders	1	8.00	65	0.37
Building Construction (NE-B)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction (NE-B)	Welders	2	8.00	46	0.45

Paving/Landscape (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (NW)	Pavers	1	8.00	130	0.42
Paving/Landscape (NW)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (NW)	Rollers	1	8.00	80	0.38
Paving/Landscape (NW)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (NW)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving/Landscape (NW)	Trenchers	1	8.00	78	0.50
Paving/Landscape (NE-B)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (NE-B)	Pavers	1	8.00	130	0.42
Paving/Landscape (NE-B)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (NE-B)	Rollers	1	8.00	80	0.38
Paving/Landscape (NE-B)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (NE-B)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving/Landscape (NE-B)	Trenchers	1	8.00	78	0.50
Demolition (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition (SE)	Excavators	0	8.00	158	0.38
Demolition (SE)	Rubber Tired Dozers	0	8.00	247	0.40
Demolition (SE)	Rubber Tired Loaders	3	8.00	203	0.36
Demolition (SE)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading (SE)	Bore/Drill Rigs	2	8.00	221	0.50
Grading (SE)	Concrete/Industrial Saws	0	0.00	81	0.73
Grading (SE)	Cranes	2	8.00	231	0.29
Grading (SE)	Excavators	4	8.00	158	0.38
Grading (SE)	Graders	0	8.00	187	0.41
Grading (SE)	Rubber Tired Dozers	2	8.00	247	0.40
Grading (SE)	Rubber Tired Loaders	2	8.00	203	0.36
Grading (SE)	Scrapers	6	8.00	367	0.48
Grading (SE)	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Foundation (SE)	Concrete/Industrial Saws	3	8.00	81	0.73
Foundation (SE)	Forklifts	5	8.00	89	0.20
Foundation (SE)	Plate Compactors	8	8.00	8	0.43
Foundation (SE)	Pumps	5	8.00	84	0.74
Foundation (SE)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (SE)	Rubber Tired Loaders	3	8.00	203	0.36
Foundation (SE)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (SE)	Trenchers	1	8.00	78	0.50
Foundation (SE)	Welders	3	8.00	46	0.45
Building Construction (SE)	Aerial Lifts	8	8.00	63	0.31
Building Construction (SE)	Air Compressors	8	8.00	78	0.48
Building Construction (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction (SE)	Cranes	4	8.00	231	0.29
Building Construction (SE)	Forklifts	6	8.00	89	0.20
Building Construction (SE)	Generator Sets	0	8.00	84	0.74
Building Construction (SE)	Plate Compactors	4	8.00	8	0.43
Building Construction (SE)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (SE)	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Building Construction (SE)	Welders	4	8.00	46	0.45
Paving/Landscape (SE)	Bore/Drill Rigs	2	8.00	221	0.50
Paving/Landscape (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (SE)	Pavers	1	8.00	130	0.42

Paving/Landscape (SE)	Paving Equipment		1	8.00	132	0.36
Paving/Landscape (SE)	Rollers		1	8.00	80	0.38
Paving/Landscape (SE)	Skid Steer Loaders		4	8.00	65	0.37
Paving/Landscape (SE)	Tractors/Loaders/Backhoes		1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition (Less SE and NW)	13	0.00	0.00	5,058.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (NE)	14	0.00	10.00	4,714.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (NE-A)	19	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (SW)	16	0.00	10.00	17,286.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Demolition (NW)	8	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (SW)	20	0.00	0.00	320.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (NW) - 2019	17	0.00	10.00	5,400.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (NE-A)	24	0.00	81.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (NW) - 2020	17	0.00	10.00	14,850.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (SW)	25	0.00	174.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (NW)	28	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (NW)	43	0.00	183.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (NE-A)	8	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (NE-B)	19	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (SW)	9	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (NE-B)	24	0.00	82.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (NW)	9	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (NE-B)	9	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Demolition (SE)	8	0.00	0.00	602.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (SE)	20	0.00	10.00	35,429.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (SE)	28	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (SE)	43	0.00	302.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (SE)	12	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition (Less SE and NW) - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust						0.0000	0.0000		0.0000	0.0000						
Off-Road						0.1501	0.1501		0.1405	0.1405						

Promenade Max Construction Emissions with Import DPM Only (Onsite)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	629.00	1000sqft	14.44	629,000.00	0
Enclosed Parking with Elevator	2,380.00	Space	21.42	952,000.00	0
Unenclosed Parking with Elevator	3,360.00	Space	30.24	1,344,000.00	0
Hotel	572.00	Room	19.07	469,000.00	0
Movie Theater (No Matinee)	15,000.00	Seat	7.75	320,000.00	0
Apartments Mid Rise	1,432.00	Dwelling Unit	37.68	1,609,000.00	4096
Strip Mall	244.00	1000sqft	5.60	244,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2033
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Specific

Construction Phase - Site Specific

Off-road Equipment -

Off-road Equipment - Site Specific (Included in Building Construction)

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

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Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - site specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Trips and VMT - Site Specific DPM Only

On-road Fugitive Dust - Site Specific

Demolition - DPM Only

Grading - DPM Only

Architectural Coating -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation - SP

Fleet Mix -

Road Dust - DPM Only

Table Name	Column Name	Default Value	New Value
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	120.00	100.00
tblConstructionPhase	NumDays	120.00	105.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
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tblConstructionPhase	NumDaysWeek	5.00	6.00
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tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	AcresOfGrading	996.00	0.00
tblGrading	AcresOfGrading	372.00	0.00
tblGrading	AcresOfGrading	494.00	0.00
tblGrading	AcresOfGrading	1,716.00	0.00
tblGrading	AcresOfGrading	624.00	0.00
tblGrading	AcresOfGrading	888.00	0.00

tblGrading	MaterialExported	0.00	315,254.00
tblGrading	MaterialExported	0.00	117,746.00
tblGrading	MaterialExported	0.00	66,000.00
tblGrading	MaterialExported	0.00	552,000.00
tblGrading	MaterialExported	0.00	156,413.00
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tblGrading	MaterialImported	0.00	56,000.00
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tblLandUse	LandUseSquareFeet	830,544.00	469,000.00
tblLandUse	LandUseSquareFeet	337,500.00	320,000.00
tblLandUse	LandUseSquareFeet	1,432,000.00	1,609,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
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tblOnRoadDust	MeanVehicleSpeed	40.00	15.00

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tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
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tblTripsAndVMT	HaulingTripLength	20.00	0.13
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tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	50.00
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tblTripsAndVMT	VendorTripNumber	802.00	82.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
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tblTripsAndVMT	VendorTripNumber	0.00	10.00
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tblTripsAndVMT	VendorTripNumber	0.00	50.00
tblTripsAndVMT	VendorTripNumber	802.00	325.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	50.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00

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tblTripsAndVMT	WorkerTripNumber	48.00	0.00
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tblTripsAndVMT	WorkerTripNumber	40.00	0.00
tblTripsAndVMT	WorkerTripNumber	521.00	0.00

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tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	50.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019					0.7845	0.7194	1.5040									
2020					0.9886	1.2175	2.2060									
2021					0.1998	0.9573	1.1571									
2022					4.0700e-003	0.5368	0.5409									
2031					1.7598	0.1854	1.9452									
2032					4.0000e-003	0.0925	0.0965									
2033					5.1000e-003	0.0857	0.0908									
Maximum					**1.7598**	**1.2175**	**2.2060**									

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019					0.3075	0.0339	0.3414									
2020					0.3889	0.0625	0.4514									
2021					0.0810	0.0483	0.1293									
2022					4.0700e-003	0.0306	0.0347									
2031					0.6883	0.0428	0.7311									
2032					4.0000e-003	0.0205	0.0245									
2033					5.1000e-003	0.0204	0.0255									
Maximum					**0.6883**	**0.0625**	**0.7311**									

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**70.23**	**0.00**	**0.00**	**60.52**	**93.17**	**76.95**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2019**	**3-31-2019**	2.0280	0.2828
2	**4-1-2019**	**6-30-2019**	3.1850	0.4918
3	**7-1-2019**	**9-30-2019**	5.9032	0.9824

4	**10-1-2019**	**12-31-2019**	7.0358	1.1745
5	**1-1-2020**	**3-31-2020**	6.6038	1.3476
6	**4-1-2020**	**6-30-2020**	7.0730	1.4776
7	**7-1-2020**	**9-30-2020**	8.2594	1.6909
8	**10-1-2020**	**12-31-2020**	8.3216	1.8026
9	**1-1-2021**	**3-31-2021**	6.6726	1.6496
10	**4-1-2021**	**6-30-2021**	4.5203	1.0914
11	**7-1-2021**	**9-30-2021**	5.2346	1.6076
12	**10-1-2021**	**12-31-2021**	4.8998	1.6735
13	**1-1-2022**	**3-31-2022**	3.7271	1.3981
14	**4-1-2022**	**6-30-2022**	3.7826	1.4278
15	**7-1-2022**	**9-30-2022**	3.8242	1.4435
16	**10-1-2022**	**12-31-2022**	1.2537	0.4236
49	**1-1-2031**	**3-31-2031**	1.3095	0.5737
50	**4-1-2031**	**6-30-2031**	1.8046	0.8141
51	**7-1-2031**	**9-30-2031**	1.8244	0.8231
52	**10-1-2031**	**12-31-2031**	1.8118	0.8104
53	**1-1-2032**	**3-31-2032**	0.8907	0.2822
54	**4-1-2032**	**6-30-2032**	1.1834	0.5646
55	**7-1-2032**	**9-30-2032**	1.6883	1.1142
56	**10-1-2032**	**12-31-2032**	1.6775	1.1035
57	**1-1-2033**	**3-31-2033**	1.6396	1.0780
58	**4-1-2033**	**6-30-2033**	1.6684	1.1006
59	**7-1-2033**	**9-30-2033**	1.6867	1.1127
		Highest	8.3216	1.8026

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition (Less SE and NW)	Demolition	1/1/2019	5/31/2019	6	130	
2	Grading (NE)	Grading	6/1/2019	8/28/2019	6	76	
3	Foundation (NE-A)	Site Preparation	8/29/2019	1/15/2020	5	100	
4	Grading (SW) - 2019	Grading	9/1/2019	12/31/2019	6	104	
5	Grading (SW) - 2020	Grading	1/1/2020	6/20/2020	6	148	
6	Architectural Coating	Architectural Coating	1/1/2020	12/31/2021	5	523	
7	Building Construction (NE-A)	Building Construction	1/16/2020	2/28/2021	5	292	
8	Demolition (NW)	Demolition	6/1/2020	6/20/2020	6	18	
9	Foundation (SW)	Site Preparation	6/21/2020	11/15/2020	5	105	
10	Grading (NW) - 2020	Grading	6/21/2020	12/31/2020	6	166	
11	Building Construction (SW)	Building Construction	11/16/2020	10/31/2021	5	250	
12	Grading (NW) - 2021	Grading	1/1/2021	3/13/2021	6	62	
13	Paving/Landscape (NE-A)	Paving	3/1/2021	3/31/2021	5	23	
14	Foundation (NW)	Site Preparation	3/14/2021	7/31/2021	5	100	
15	Foundation (NE-B)	Site Preparation	4/1/2021	8/31/2021	5	109	
16	Building Construction (NW)	Building Construction	8/1/2021	10/31/2022	5	326	
17	Building Construction (NE-B)	Building Construction	9/1/2021	9/30/2022	5	283	
18	Paving/Landscape (SW)	Paving	11/1/2021	11/30/2021	5	22	
19	Paving/Landscape (NE-B)	Paving	10/1/2022	10/31/2022	5	21	
20	Paving/Landscape (NW)	Paving	11/1/2022	11/30/2022	5	22	

21	Demolition (SE)	Demolition	1/1/2031	1/31/2031	6	27	
22	Grading (SE)	Grading	2/1/2031	12/31/2031	6	286	
23	Foundation (SE)	Site Preparation	1/6/2032	5/31/2032	5	105	
24	Building Construction (SE)	Building Construction	6/1/2032	10/31/2033	5	370	
25	Paving/Landscape (SE)	Paving	11/1/2033	11/30/2033	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 51.66

Residential Indoor: 3,258,225; Residential Outdoor: 1,086,075; Non-Residential Indoor: 2,493,000; Non-Residential Outdoor: 831,000;

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition (Less SE and NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition (Less SE and NW)	Cranes	2	8.00	231	0.29
Demolition (Less SE and NW)	Excavators	3	8.00	158	0.38
Demolition (Less SE and NW)	Rubber Tired Dozers	0	8.00	247	0.40
Demolition (Less SE and NW)	Rubber Tired Loaders	3	8.00	203	0.36
Demolition (Less SE and NW)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading (NE)	Excavators	0	8.00	158	0.38
Grading (NE)	Graders	1	8.00	187	0.41
Grading (NE)	Rollers	2	8.00	80	0.38
Grading (NE)	Rubber Tired Dozers	2	8.00	247	0.40
Grading (NE)	Rubber Tired Loaders	2	8.00	203	0.36
Grading (NE)	Scrapers	6	8.00	367	0.48
Grading (NE)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Foundation (NE-A)	Concrete/Industrial Saws	2	8.00	81	0.73
Foundation (NE-A)	Forklifts	3	8.00	89	0.20
Foundation (NE-A)	Plate Compactors	6	8.00	8	0.43
Foundation (NE-A)	Pumps	3	8.00	84	0.74
Foundation (NE-A)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (NE-A)	Rubber Tired Loaders	2	8.00	203	0.36
Foundation (NE-A)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (NE-A)	Trenchers	1	8.00	78	0.50
Foundation (NE-A)	Welders	2	8.00	46	0.45
Grading (SW) - 2019	Bore/Drill Rigs	2	8.00	221	0.50
Grading (SW) - 2019	Cranes	2	8.00	231	0.29
Grading (SW) - 2019	Excavators	2	8.00	158	0.38
Grading (SW) - 2019	Graders	0	8.00	187	0.41
Grading (SW) - 2019	Rubber Tired Dozers	1	8.00	247	0.40
Grading (SW) - 2019	Rubber Tired Loaders	2	8.00	203	0.36
Grading (SW) - 2019	Scrapers	6	8.00	367	0.48
Grading (SW) - 2019	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading (SW) - 2020	Bore/Drill Rigs	2	8.00	221	0.50
Grading (SW) - 2020	Cranes	2	8.00	231	0.29
Grading (SW) - 2020	Excavators	2	8.00	158	0.38
Grading (SW) - 2020	Graders	0	8.00	187	0.41
Grading (SW) - 2020	Rubber Tired Dozers	1	8.00	247	0.40
Grading (SW) - 2020	Rubber Tired Loaders	2	8.00	203	0.36
Grading (SW) - 2020	Scrapers	6	8.00	367	0.48

Grading (SW) - 2020	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	0	6.00	78	0.48
Building Construction (NE-A)	Aerial Lifts	5	8.00	63	0.31
Building Construction (NE-A)	Air Compressors	5	8.00	78	0.48
Building Construction (NE-A)	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction (NE-A)	Cranes	2	8.00	231	0.29
Building Construction (NE-A)	Forklifts	3	8.00	89	0.20
Building Construction (NE-A)	Generator Sets	0	8.00	84	0.74
Building Construction (NE-A)	Plate Compactors	2	8.00	8	0.43
Building Construction (NE-A)	Skid Steer Loaders	1	8.00	65	0.37
Building Construction (NE-A)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction (NE-A)	Welders	2	8.00	46	0.45
Demolition (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition (NW)	Excavators	0	8.00	158	0.38
Demolition (NW)	Rubber Tired Dozers	0	8.00	247	0.40
Demolition (NW)	Rubber Tired Loaders	3	8.00	203	0.36
Demolition (NW)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Foundation (SW)	Concrete/Industrial Saws	2	8.00	81	0.73
Foundation (SW)	Excavators	1	8.00	158	0.38
Foundation (SW)	Forklifts	3	8.00	89	0.20
Foundation (SW)	Plate Compactors	6	8.00	8	0.43
Foundation (SW)	Pumps	3	8.00	84	0.74
Foundation (SW)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (SW)	Rubber Tired Loaders	2	8.00	203	0.36
Foundation (SW)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (SW)	Trenchers	1	8.00	78	0.50
Foundation (SW)	Welders	2	8.00	46	0.45
Grading (NW) - 2020	Bore/Drill Rigs	2	8.00	221	0.50
Grading (NW) - 2020	Cranes	2	8.00	231	0.29
Grading (NW) - 2020	Excavators	2	8.00	158	0.38
Grading (NW) - 2020	Graders	0	8.00	187	0.41
Grading (NW) - 2020	Rubber Tired Dozers	1	8.00	247	0.40
Grading (NW) - 2020	Rubber Tired Loaders	2	8.00	203	0.36
Grading (NW) - 2020	Scrapers	6	8.00	367	0.48
Grading (NW) - 2020	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction (SW)	Aerial Lifts	5	8.00	63	0.31
Building Construction (SW)	Air Compressors	5	8.00	78	0.48
Building Construction (SW)	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction (SW)	Cranes	2	8.00	231	0.29
Building Construction (SW)	Forklifts	3	8.00	89	0.20
Building Construction (SW)	Generator Sets	0	8.00	84	0.74
Building Construction (SW)	Plate Compactors	2	8.00	8	0.43
Building Construction (SW)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (SW)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction (SW)	Welders	2	8.00	46	0.45
Grading (NW) - 2021	Bore/Drill Rigs	2	8.00	221	0.50
Grading (NW) - 2021	Cranes	2	8.00	231	0.29
Grading (NW) - 2021	Excavators	2	8.00	158	0.38
Grading (NW) - 2021	Graders	0	8.00	187	0.41
Grading (NW) - 2021	Rubber Tired Dozers	1	8.00	247	0.40

Grading (NW) - 2021	Rubber Tired Loaders	2	8.00	203	0.36
Grading (NW) - 2021	Scrapers	6	8.00	367	0.48
Grading (NW) - 2021	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving/Landscape (NE-A)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (NE-A)	Pavers	1	8.00	130	0.42
Paving/Landscape (NE-A)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (NE-A)	Rollers	1	8.00	80	0.38
Paving/Landscape (NE-A)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (NE-A)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Foundation (NW)	Concrete/Industrial Saws	3	8.00	81	0.73
Foundation (NW)	Excavators	0	8.00	158	0.38
Foundation (NW)	Forklifts	5	8.00	89	0.20
Foundation (NW)	Plate Compactors	8	8.00	8	0.43
Foundation (NW)	Pumps	5	8.00	84	0.74
Foundation (NW)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (NW)	Rubber Tired Loaders	3	8.00	203	0.36
Foundation (NW)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (NW)	Trenchers	1	8.00	78	0.50
Foundation (NW)	Welders	3	8.00	46	0.45
Foundation (NE-B)	Concrete/Industrial Saws	2	8.00	81	0.73
Foundation (NE-B)	Excavators	0	8.00	158	0.38
Foundation (NE-B)	Forklifts	3	8.00	89	0.20
Foundation (NE-B)	Plate Compactors	6	8.00	8	0.43
Foundation (NE-B)	Pumps	3	8.00	84	0.74
Foundation (NE-B)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (NE-B)	Rubber Tired Loaders	2	8.00	203	0.36
Foundation (NE-B)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (NE-B)	Trenchers	1	8.00	78	0.50
Foundation (NE-B)	Welders	2	8.00	46	0.45
Building Construction (NW)	Aerial Lifts	8	8.00	63	0.31
Building Construction (NW)	Air Compressors	8	8.00	78	0.48
Building Construction (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction (NW)	Cranes	4	8.00	231	0.29
Building Construction (NW)	Forklifts	6	8.00	89	0.20
Building Construction (NW)	Generator Sets	0	8.00	84	0.74
Building Construction (NW)	Plate Compactors	4	8.00	8	0.43
Building Construction (NW)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (NW)	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Building Construction (NW)	Welders	4	8.00	46	0.45
Building Construction (NE-B)	Aerial Lifts	5	8.00	63	0.31
Building Construction (NE-B)	Air Compressors	5	8.00	78	0.48
Building Construction (NE-B)	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction (NE-B)	Cranes	2	8.00	231	0.29
Building Construction (NE-B)	Forklifts	3	8.00	89	0.20
Building Construction (NE-B)	Generator Sets	0	8.00	84	0.74
Building Construction (NE-B)	Plate Compactors	2	8.00	8	0.43
Building Construction (NE-B)	Skid Steer Loaders	1	8.00	65	0.37
Building Construction (NE-B)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction (NE-B)	Welders	2	8.00	46	0.45
Paving/Landscape (SW)	Concrete/Industrial Saws	2	8.00	81	0.73

Paving/Landscape (SW)	Pavers	1	8.00	130	0.42
Paving/Landscape (SW)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (SW)	Rollers	1	8.00	80	0.38
Paving/Landscape (SW)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (SW)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving/Landscape (SW)	Trenchers	1	8.00	78	0.50
Paving/Landscape (NE-B)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (NE-B)	Pavers	1	8.00	130	0.42
Paving/Landscape (NE-B)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (NE-B)	Rollers	1	8.00	80	0.38
Paving/Landscape (NE-B)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (NE-B)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving/Landscape (NE-B)	Trenchers	1	8.00	78	0.50
Paving/Landscape (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (NW)	Pavers	1	8.00	130	0.42
Paving/Landscape (NW)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (NW)	Rollers	1	8.00	80	0.38
Paving/Landscape (NW)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (NW)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving/Landscape (NW)	Trenchers	1	8.00	78	0.50
Demolition (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition (SE)	Excavators	0	8.00	158	0.38
Demolition (SE)	Rubber Tired Dozers	0	8.00	247	0.40
Demolition (SE)	Rubber Tired Loaders	3	8.00	203	0.36
Demolition (SE)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading (SE)	Bore/Drill Rigs	2	8.00	221	0.50
Grading (SE)	Concrete/Industrial Saws	0	0.00	81	0.73
Grading (SE)	Cranes	2	8.00	231	0.29
Grading (SE)	Excavators	4	8.00	158	0.38
Grading (SE)	Graders	0	8.00	187	0.41
Grading (SE)	Rubber Tired Dozers	2	8.00	247	0.40
Grading (SE)	Rubber Tired Loaders	2	8.00	203	0.36
Grading (SE)	Scrapers	6	8.00	367	0.48
Grading (SE)	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Foundation (SE)	Concrete/Industrial Saws	3	8.00	81	0.73
Foundation (SE)	Forklifts	5	8.00	89	0.20
Foundation (SE)	Plate Compactors	8	8.00	8	0.43
Foundation (SE)	Pumps	5	8.00	84	0.74
Foundation (SE)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (SE)	Rubber Tired Loaders	3	8.00	203	0.36
Foundation (SE)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (SE)	Trenchers	1	8.00	78	0.50
Foundation (SE)	Welders	3	8.00	46	0.45
Building Construction (SE)	Aerial Lifts	8	8.00	63	0.31
Building Construction (SE)	Air Compressors	8	8.00	78	0.48
Building Construction (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction (SE)	Cranes	4	8.00	231	0.29
Building Construction (SE)	Forklifts	6	8.00	89	0.20
Building Construction (SE)	Generator Sets	0	8.00	84	0.74
Building Construction (SE)	Plate Compactors	4	8.00	8	0.43

Building Construction (SE)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (SE)	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Building Construction (SE)	Welders	4	8.00	46	0.45
Paving/Landscape (SE)	Bore/Drill Rigs	2	8.00	221	0.50
Paving/Landscape (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (SE)	Pavers	1	8.00	130	0.42
Paving/Landscape (SE)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (SE)	Rollers	1	8.00	80	0.38
Paving/Landscape (SE)	Skid Steer Loaders	4	8.00	65	0.37
Paving/Landscape (SE)	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition (Less SE and NW)	13	0.00	0.00	5,160.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (NE)	14	0.00	10.00	11,429.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (NE-A)	19	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (SW) - 2019	16	0.00	10.00	15,624.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (SW) - 2020	16	0.00	10.00	22,233.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (NE-A)	24	0.00	81.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Demolition (NW)	8	0.00	0.00	340.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (SW)	20	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (NW) - 2020	17	0.00	10.00	24,754.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (SW)	25	0.00	82.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (NW) - 2021	17	0.00	10.00	9,246.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (NE-A)	8	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (NW)	28	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (NE-B)	19	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (NW)	43	0.00	183.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (NE-B)	24	0.00	82.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (SW)	9	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (NE-B)	9	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (NW)	9	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Demolition (SE)	8	0.00	0.00	780.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (SE)	20	0.00	10.00	43,429.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (SE)	28	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (SE)	43	0.00	325.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (SE)	12	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition (Less SE and NW) - 2019

Unmitigated Construction On-Site

Promenade Max Construction Emissions with No Import No NE Onsite for DPM HRA

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	P
General Office Building	629.00	1000sqft	14.44	629,000.00	
Enclosed Parking with Elevator	2,380.00	Space	21.42	952,000.00	
Unenclosed Parking with Elevator	3,360.00	Space	30.24	1,344,000.00	
Hotel	572.00	Room	19.07	469,000.00	
Movie Theater (No Matinee)	15,000.00	Seat	7.75	320,000.00	
Apartments Mid Rise	1,432.00	Dwelling Unit	37.68	1,609,000.00	
Strip Mall	244.00	1000sqft	5.60	244,000.00	

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2033
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Specific

Construction Phase - Site Specific

Off-road Equipment -

Off-road Equipment - Site Specific (Included in Building Construction)

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - site specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Trips and VMT - Site Specific

On-road Fugitive Dust - Site Specific

Demolition -

Grading - DPM HRA Run

Architectural Coating -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation - SP

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	23.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	18.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	28.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	32.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	13.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	22.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	24.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	29.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	18.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	3,100.00	326.00
tblConstructionPhase	NumDays	200.00	27.00
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tblConstructionPhase	NumDays	310.00	236.00
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tblConstructionPhase	NumDays	220.00	23.00
tblConstructionPhase	NumDays	220.00	22.00
tblConstructionPhase	NumDays	120.00	107.00
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tblConstructionPhase	NumDays	120.00	91.00
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tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
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tblGrading	AcresOfGrading	594.00	0.00
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tblGrading	MaterialExported	0.00	496,000.00
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tblGrading	MaterialExported	0.00	206,800.00
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tblOffRoadEquipment	UsageHours	7.00	8.00

tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
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tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
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tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
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tblTripsAndVMT	HaulingTripLength	20.00	0.13
tblTripsAndVMT	HaulingTripLength	20.00	0.13
tblTripsAndVMT	HaulingTripLength	20.00	0.13
tblTripsAndVMT	HaulingTripLength	20.00	0.13
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tblTripsAndVMT	VendorTripLength	6.90	0.13
tblTripsAndVMT	VendorTripLength	6.90	0.13
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tblTripsAndVMT	VendorTripLength	6.90	0.13
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tblTripsAndVMT	WorkerTripNumber	2,606.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2
Year	tons/yr										MT/yr					
2019						0.4390	0.9163		0.4059	0.6607						
2020						0.8812	1.1959		0.8371	1.0042						
2021						0.5342	0.5382		0.5106	0.5119						
2031						0.1671	1.6190		0.1670	0.9533						
2032						0.0959	0.1004		0.0959	0.0973						
2033						0.0693	0.0732		0.0693	0.0705						
Maximum						**0.8812**	**1.6190**		**0.8371**	**1.0042**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2
Year	tons/yr										MT/yr					
2019						0.0224	0.2096		0.0223	0.1220						
2020						0.0410	0.1667		0.0410	0.1070						
2021						0.0263	0.0304		0.0263	0.0275						
2031						0.0382	0.6061		0.0382	0.3453						
2032						0.0218	0.0264		0.0218	0.0232						
2033						0.0165	0.0203		0.0165	0.0176						

Maximum						**0.0410**	**0.6061**		**0.0410**	**0.3453**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**92.40**	**76.16**	**0.00**	**92.04**	**80.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading (SW)	Grading	7/8/2019	11/19/2019	6	116	
2	Demolition (NW)	Demolition	11/1/2019	11/19/2019	6	16	
3	Foundation (SW)	Site Preparation	11/20/2019	4/15/2020	5	106	
4	Grading (NW) - 2019	Grading	11/20/2019	12/31/2019	6	36	
5	Grading (NW) - 2020	Grading	1/1/2020	4/24/2020	6	99	
6	Architectural Coating	Architectural Coating	1/1/2020	12/30/2021	5	522	
7	Building Construction (SW)	Building Construction	4/16/2020	3/31/2021	5	250	
8	Foundation (NW)	Site Preparation	4/25/2020	8/31/2020	5	91	
9	Building Construction (NW)	Building Construction	9/1/2020	11/30/2021	5	326	
10	Paving/Landscape (SW)	Paving	4/1/2021	4/30/2021	5	22	
11	Paving/Landscape (NW)	Paving	12/1/2021	12/31/2021	5	23	
12	Demolition (SE)	Demolition	1/1/2031	1/31/2031	6	27	
13	Grading (SE)	Grading	2/1/2031	11/3/2031	6	236	
14	Foundation (SE)	Site Preparation	11/4/2031	3/31/2032	5	107	
15	Building Construction (SE)	Building Construction	4/1/2032	8/31/2033	5	370	
16	Paving/Landscape (SE)	Paving	9/1/2033	9/30/2033	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 51.66

Residential Indoor: 3,258,225; Residential Outdoor: 1,086,075; Non-Residential Indoor: 2,493,000; Non-Residential Outdoor: 831,000;

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading (SW)	Bore/Drill Rigs	2	8.00	221	0.50
Grading (SW)	Cranes	2	8.00	231	0.29
Grading (SW)	Excavators	2	8.00	158	0.38
Grading (SW)	Graders	0	8.00	187	0.41
Grading (SW)	Rubber Tired Dozers	1	8.00	247	0.40
Grading (SW)	Rubber Tired Loaders	2	8.00	203	0.36
Grading (SW)	Scrapers	6	8.00	367	0.48
Grading (SW)	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Demolition (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition (NW)	Excavators	0	8.00	158	0.38
Demolition (NW)	Rubber Tired Dozers	0	8.00	247	0.40
Demolition (NW)	Rubber Tired Loaders	3	8.00	203	0.36
Demolition (NW)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Foundation (SW)	Concrete/Industrial Saws	2	8.00	81	0.73
Foundation (SW)	Excavators	1	8.00	158	0.38
Foundation (SW)	Forklifts	3	8.00	89	0.20
Foundation (SW)	Plate Compactors	6	8.00	8	0.43
Foundation (SW)	Pumps	3	8.00	84	0.74
Foundation (SW)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (SW)	Rubber Tired Loaders	2	8.00	203	0.36
Foundation (SW)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (SW)	Trenchers	1	8.00	78	0.50
Foundation (SW)	Welders	2	8.00	46	0.45
Grading (NW) - 2019	Bore/Drill Rigs	2	8.00	221	0.50
Grading (NW) - 2019	Cranes	2	8.00	231	0.29
Grading (NW) - 2019	Excavators	2	8.00	158	0.38
Grading (NW) - 2019	Graders	0	8.00	187	0.41
Grading (NW) - 2019	Rubber Tired Dozers	1	8.00	247	0.40
Grading (NW) - 2019	Rubber Tired Loaders	2	8.00	203	0.36
Grading (NW) - 2019	Scrapers	6	8.00	367	0.48
Grading (NW) - 2019	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading (NW) - 2020	Bore/Drill Rigs	2	8.00	221	0.50
Grading (NW) - 2020	Cranes	2	8.00	231	0.29
Grading (NW) - 2020	Excavators	2	8.00	158	0.38
Grading (NW) - 2020	Graders	0	8.00	187	0.41
Grading (NW) - 2020	Rubber Tired Dozers	1	8.00	247	0.40
Grading (NW) - 2020	Rubber Tired Loaders	2	8.00	203	0.36
Grading (NW) - 2020	Scrapers	6	8.00	367	0.48
Grading (NW) - 2020	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	0	6.00	78	0.48
Building Construction (SW)	Aerial Lifts	5	8.00	63	0.31
Building Construction (SW)	Air Compressors	5	8.00	78	0.48
Building Construction (SW)	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction (SW)	Cranes	2	8.00	231	0.29
Building Construction (SW)	Forklifts	3	8.00	89	0.20
Building Construction (SW)	Generator Sets	0	8.00	84	0.74
Building Construction (SW)	Plate Compactors	2	8.00	8	0.43
Building Construction (SW)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (SW)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction (SW)	Welders	2	8.00	46	0.45
Foundation (NW)	Concrete/Industrial Saws	3	8.00	81	0.73
Foundation (NW)	Excavators	0	8.00	158	0.38
Foundation (NW)	Forklifts	5	8.00	89	0.20
Foundation (NW)	Plate Compactors	8	8.00	8	0.43

Foundation (NW)	Pumps	5	8.00	84	0.74
Foundation (NW)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (NW)	Rubber Tired Loaders	3	8.00	203	0.36
Foundation (NW)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (NW)	Trenchers	1	8.00	78	0.50
Foundation (NW)	Welders	3	8.00	46	0.45
Building Construction (NW)	Aerial Lifts	8	8.00	63	0.31
Building Construction (NW)	Air Compressors	8	8.00	78	0.48
Building Construction (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction (NW)	Cranes	4	8.00	231	0.29
Building Construction (NW)	Forklifts	6	8.00	89	0.20
Building Construction (NW)	Generator Sets	0	8.00	84	0.74
Building Construction (NW)	Plate Compactors	4	8.00	8	0.43
Building Construction (NW)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (NW)	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Building Construction (NW)	Welders	4	8.00	46	0.45
Paving/Landscape (SW)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (SW)	Pavers	1	8.00	130	0.42
Paving/Landscape (SW)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (SW)	Rollers	1	8.00	80	0.38
Paving/Landscape (SW)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (SW)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving/Landscape (SW)	Trenchers	1	8.00	78	0.50
Paving/Landscape (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (NW)	Pavers	1	8.00	130	0.42
Paving/Landscape (NW)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (NW)	Rollers	1	8.00	80	0.38
Paving/Landscape (NW)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (NW)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving/Landscape (NW)	Trenchers	1	8.00	78	0.50
Demolition (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition (SE)	Excavators	0	8.00	158	0.38
Demolition (SE)	Rubber Tired Dozers	0	8.00	247	0.40
Demolition (SE)	Rubber Tired Loaders	3	8.00	203	0.36
Demolition (SE)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading (SE)	Bore/Drill Rigs	2	8.00	221	0.50
Grading (SE)	Concrete/Industrial Saws	0	0.00	81	0.73
Grading (SE)	Cranes	2	8.00	231	0.29
Grading (SE)	Excavators	4	8.00	158	0.38
Grading (SE)	Graders	0	8.00	187	0.41
Grading (SE)	Rubber Tired Dozers	2	8.00	247	0.40
Grading (SE)	Rubber Tired Loaders	2	8.00	203	0.36
Grading (SE)	Scrapers	6	8.00	367	0.48
Grading (SE)	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Foundation (SE)	Concrete/Industrial Saws	3	8.00	81	0.73
Foundation (SE)	Forklifts	5	8.00	89	0.20

Foundation (SE)	Plate Compactors	8	8.00	8	0.43
Foundation (SE)	Pumps	5	8.00	84	0.74
Foundation (SE)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (SE)	Rubber Tired Loaders	3	8.00	203	0.36
Foundation (SE)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (SE)	Trenchers	1	8.00	78	0.50
Foundation (SE)	Welders	3	8.00	46	0.45
Building Construction (SE)	Aerial Lifts	8	8.00	63	0.31
Building Construction (SE)	Air Compressors	8	8.00	78	0.48
Building Construction (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction (SE)	Cranes	4	8.00	231	0.29
Building Construction (SE)	Forklifts	6	8.00	89	0.20
Building Construction (SE)	Generator Sets	0	8.00	84	0.74
Building Construction (SE)	Plate Compactors	4	8.00	8	0.43
Building Construction (SE)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (SE)	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Building Construction (SE)	Welders	4	8.00	46	0.45
Paving/Landscape (SE)	Bore/Drill Rigs	2	8.00	221	0.50
Paving/Landscape (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (SE)	Pavers	1	8.00	130	0.42
Paving/Landscape (SE)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (SE)	Rollers	1	8.00	80	0.38
Paving/Landscape (SE)	Skid Steer Loaders	4	8.00	65	0.37
Paving/Landscape (SE)	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading (SW)	16	0.00	10.00	17,286.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Demolition (NW)	8	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (SW)	20	0.00	0.00	320.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (NW) - 2019	17	0.00	10.00	5,400.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (NW) - 2020	17	0.00	10.00	14,850.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (SW)	25	0.00	174.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (NW)	28	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (NW)	43	0.00	183.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (SW)	9	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (NW)	9	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Demolition (SE)	8	0.00	0.00	602.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (SE)	20	0.00	10.00	35,429.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (SE)	28	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (SE)	43	0.00	302.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (SE)	12	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Promenade Max Construction Emissions with Import DPM Only and No NE (Onsite)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	629.00	1000sqft	14.44	629,000.00	0
Enclosed Parking with Elevator	2,380.00	Space	21.42	952,000.00	0
Unenclosed Parking with Elevator	3,360.00	Space	30.24	1,344,000.00	0
Hotel	572.00	Room	19.07	469,000.00	0
Movie Theater (No Matinee)	15,000.00	Seat	7.75	320,000.00	0
Apartments Mid Rise	1,432.00	Dwelling Unit	37.68	1,609,000.00	4096
Strip Mall	244.00	1000sqft	5.60	244,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2033
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Specific

Construction Phase - Site Specific

Off-road Equipment -

Off-road Equipment - Site Specific (Included in Building Construction)

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - site specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Trips and VMT - Site Specific DPM Only

On-road Fugitive Dust - Site Specific

Demolition - DPM Only

Grading - DPM Only

Architectural Coating -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation - SP

Fleet Mix -

Road Dust - DPM Only

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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019					0.3254	0.2649	0.5903									
2020					0.9870	0.9064	1.8934									
2021					0.1986	0.7142	0.9128									
2022					2.8900e-003	0.3551	0.3580									
2031					1.7598	0.1854	1.9452									
2032					4.0000e-003	0.0925	0.0965									
2033					5.1000e-003	0.0857	0.0908									
Maximum					**1.7598**	**0.9064**	**1.9452**									

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019					0.1276	0.0140	0.1415									
2020					0.3874	0.0492	0.4365									
2021					0.0798	0.0367	0.1164									

2022					2.8900e-003	0.0202	0.0231									
2031					0.6883	0.0428	0.7311									
2032					4.0000e-003	0.0205	0.0245									
2033					5.1000e-003	0.0204	0.0255									
Maximum					**0.6883**	**0.0492**	**0.7311**									

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**68.56**	**0.00**	**0.00**	**60.55**	**92.18**	**74.54**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
3	**7-1-2019**	**9-30-2019**	1.8270	0.3100
4	**10-1-2019**	**12-31-2019**	5.5789	0.9265
5	**1-1-2020**	**3-31-2020**	5.0736	0.8964
6	**4-1-2020**	**6-30-2020**	5.5009	0.9802
7	**7-1-2020**	**9-30-2020**	6.6700	1.1881
8	**10-1-2020**	**12-31-2020**	6.7370	1.3046
9	**1-1-2021**	**3-31-2021**	5.5447	1.2807
10	**4-1-2021**	**6-30-2021**	3.2869	0.8496
11	**7-1-2021**	**9-30-2021**	3.9176	1.2801
12	**10-1-2021**	**12-31-2021**	3.4426	1.1789
13	**1-1-2022**	**3-31-2022**	2.4259	0.9177
14	**4-1-2022**	**6-30-2022**	2.4626	0.9377
15	**7-1-2022**	**9-30-2022**	2.4897	0.9480
16	**10-1-2022**	**12-31-2022**	1.0412	0.3690
49	**1-1-2031**	**3-31-2031**	1.3095	0.5737
50	**4-1-2031**	**6-30-2031**	1.8046	0.8141
51	**7-1-2031**	**9-30-2031**	1.8244	0.8231
52	**10-1-2031**	**12-31-2031**	1.8118	0.8104
53	**1-1-2032**	**3-31-2032**	0.8907	0.2822
54	**4-1-2032**	**6-30-2032**	1.1834	0.5646
55	**7-1-2032**	**9-30-2032**	1.6883	1.1142
56	**10-1-2032**	**12-31-2032**	1.6775	1.1035
57	**1-1-2033**	**3-31-2033**	1.6396	1.0780
58	**4-1-2033**	**6-30-2033**	1.6684	1.1006
59	**7-1-2033**	**9-30-2033**	1.6867	1.1127
		Highest	6.7370	1.3046

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading (SW) - 2019	Grading	9/1/2019	12/31/2019	6	104	
2	Grading (SW) - 2020	Grading	1/1/2020	6/20/2020	6	148	
3	Architectural Coating	Architectural Coating	1/1/2020	12/31/2021	5	523	
4	Demolition (NW)	Demolition	6/1/2020	6/20/2020	6	18	
5	Foundation (SW)	Site Preparation	6/21/2020	11/15/2020	5	105	
6	Grading (NW) - 2020	Grading	6/21/2020	12/31/2020	6	166	
7	Building Construction (SW)	Building Construction	11/16/2020	10/31/2021	5	250	

8	Grading (NW) - 2021	Grading	1/1/2021	3/13/2021	6	62	
9	Foundation (NW)	Site Preparation	3/14/2021	7/31/2021	5	100	
10	Building Construction (NW)	Building Construction	8/1/2021	10/31/2022	5	326	
11	Paving/Landscape (SW)	Paving	11/1/2021	11/30/2021	5	22	
12	Paving/Landscape (NW)	Paving	11/1/2022	11/30/2022	5	22	
13	Demolition (SE)	Demolition	1/1/2031	1/31/2031	6	27	
14	Grading (SE)	Grading	2/1/2031	12/31/2031	6	286	
15	Foundation (SE)	Site Preparation	1/6/2032	5/31/2032	5	105	
16	Building Construction (SE)	Building Construction	6/1/2032	10/31/2033	5	370	
17	Paving/Landscape (SE)	Paving	11/1/2033	11/30/2033	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 51.66

Residential Indoor: 3,258,225; Residential Outdoor: 1,086,075; Non-Residential Indoor: 2,493,000; Non-Residential Outdoor: 831,000;

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading (SW) - 2019	Bore/Drill Rigs	2	8.00	221	0.50
Grading (SW) - 2019	Cranes	2	8.00	231	0.29
Grading (SW) - 2019	Excavators	2	8.00	158	0.38
Grading (SW) - 2019	Graders	0	8.00	187	0.41
Grading (SW) - 2019	Rubber Tired Dozers	1	8.00	247	0.40
Grading (SW) - 2019	Rubber Tired Loaders	2	8.00	203	0.36
Grading (SW) - 2019	Scrapers	6	8.00	367	0.48
Grading (SW) - 2019	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading (SW) - 2020	Bore/Drill Rigs	2	8.00	221	0.50
Grading (SW) - 2020	Cranes	2	8.00	231	0.29
Grading (SW) - 2020	Excavators	2	8.00	158	0.38
Grading (SW) - 2020	Graders	0	8.00	187	0.41
Grading (SW) - 2020	Rubber Tired Dozers	1	8.00	247	0.40
Grading (SW) - 2020	Rubber Tired Loaders	2	8.00	203	0.36
Grading (SW) - 2020	Scrapers	6	8.00	367	0.48
Grading (SW) - 2020	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition (NW)	Excavators	0	8.00	158	0.38
Demolition (NW)	Rubber Tired Dozers	0	8.00	247	0.40
Demolition (NW)	Rubber Tired Loaders	3	8.00	203	0.36
Demolition (NW)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Foundation (SW)	Concrete/Industrial Saws	2	8.00	81	0.73
Foundation (SW)	Excavators	1	8.00	158	0.38
Foundation (SW)	Forklifts	3	8.00	89	0.20
Foundation (SW)	Plate Compactors	6	8.00	8	0.43
Foundation (SW)	Pumps	3	8.00	84	0.74
Foundation (SW)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (SW)	Rubber Tired Loaders	2	8.00	203	0.36
Foundation (SW)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (SW)	Trenchers	1	8.00	78	0.50
Foundation (SW)	Welders	2	8.00	46	0.45

Grading (NW) - 2020	Bore/Drill Rigs	2	8.00	221	0.50
Grading (NW) - 2020	Cranes	2	8.00	231	0.29
Grading (NW) - 2020	Excavators	2	8.00	158	0.38
Grading (NW) - 2020	Graders	0	8.00	187	0.41
Grading (NW) - 2020	Rubber Tired Dozers	1	8.00	247	0.40
Grading (NW) - 2020	Rubber Tired Loaders	2	8.00	203	0.36
Grading (NW) - 2020	Scrapers	6	8.00	367	0.48
Grading (NW) - 2020	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction (SW)	Aerial Lifts	5	8.00	63	0.31
Building Construction (SW)	Air Compressors	5	8.00	78	0.48
Building Construction (SW)	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction (SW)	Cranes	2	8.00	231	0.29
Building Construction (SW)	Forklifts	3	8.00	89	0.20
Building Construction (SW)	Generator Sets	0	8.00	84	0.74
Building Construction (SW)	Plate Compactors	2	8.00	8	0.43
Building Construction (SW)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (SW)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction (SW)	Welders	2	8.00	46	0.45
Grading (NW) - 2021	Bore/Drill Rigs	2	8.00	221	0.50
Grading (NW) - 2021	Cranes	2	8.00	231	0.29
Grading (NW) - 2021	Excavators	2	8.00	158	0.38
Grading (NW) - 2021	Graders	0	8.00	187	0.41
Grading (NW) - 2021	Rubber Tired Dozers	1	8.00	247	0.40
Grading (NW) - 2021	Rubber Tired Loaders	2	8.00	203	0.36
Grading (NW) - 2021	Scrapers	6	8.00	367	0.48
Grading (NW) - 2021	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Foundation (NW)	Concrete/Industrial Saws	3	8.00	81	0.73
Foundation (NW)	Excavators	0	8.00	158	0.38
Foundation (NW)	Forklifts	5	8.00	89	0.20
Foundation (NW)	Plate Compactors	8	8.00	8	0.43
Foundation (NW)	Pumps	5	8.00	84	0.74
Foundation (NW)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (NW)	Rubber Tired Loaders	3	8.00	203	0.36
Foundation (NW)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (NW)	Trenchers	1	8.00	78	0.50
Foundation (NW)	Welders	3	8.00	46	0.45
Building Construction (NW)	Aerial Lifts	8	8.00	63	0.31
Building Construction (NW)	Air Compressors	8	8.00	78	0.48
Building Construction (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction (NW)	Cranes	4	8.00	231	0.29
Building Construction (NW)	Forklifts	6	8.00	89	0.20
Building Construction (NW)	Generator Sets	0	8.00	84	0.74
Building Construction (NW)	Plate Compactors	4	8.00	8	0.43
Building Construction (NW)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (NW)	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Building Construction (NW)	Welders	4	8.00	46	0.45
Paving/Landscape (SW)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (SW)	Pavers	1	8.00	130	0.42
Paving/Landscape (SW)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (SW)	Rollers	1	8.00	80	0.38

Paving/Landscape (SW)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (SW)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving/Landscape (SW)	Trenchers	1	8.00	78	0.50
Paving/Landscape (NW)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (NW)	Pavers	1	8.00	130	0.42
Paving/Landscape (NW)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (NW)	Rollers	1	8.00	80	0.38
Paving/Landscape (NW)	Skid Steer Loaders	2	8.00	65	0.37
Paving/Landscape (NW)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving/Landscape (NW)	Trenchers	1	8.00	78	0.50
Demolition (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition (SE)	Excavators	0	8.00	158	0.38
Demolition (SE)	Rubber Tired Dozers	0	8.00	247	0.40
Demolition (SE)	Rubber Tired Loaders	3	8.00	203	0.36
Demolition (SE)	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading (SE)	Bore/Drill Rigs	2	8.00	221	0.50
Grading (SE)	Concrete/Industrial Saws	0	0.00	81	0.73
Grading (SE)	Cranes	2	8.00	231	0.29
Grading (SE)	Excavators	4	8.00	158	0.38
Grading (SE)	Graders	0	8.00	187	0.41
Grading (SE)	Rubber Tired Dozers	2	8.00	247	0.40
Grading (SE)	Rubber Tired Loaders	2	8.00	203	0.36
Grading (SE)	Scrapers	6	8.00	367	0.48
Grading (SE)	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Foundation (SE)	Concrete/Industrial Saws	3	8.00	81	0.73
Foundation (SE)	Forklifts	5	8.00	89	0.20
Foundation (SE)	Plate Compactors	8	8.00	8	0.43
Foundation (SE)	Pumps	5	8.00	84	0.74
Foundation (SE)	Rubber Tired Dozers	0	8.00	247	0.40
Foundation (SE)	Rubber Tired Loaders	3	8.00	203	0.36
Foundation (SE)	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation (SE)	Trenchers	1	8.00	78	0.50
Foundation (SE)	Welders	3	8.00	46	0.45
Building Construction (SE)	Aerial Lifts	8	8.00	63	0.31
Building Construction (SE)	Air Compressors	8	8.00	78	0.48
Building Construction (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction (SE)	Cranes	4	8.00	231	0.29
Building Construction (SE)	Forklifts	6	8.00	89	0.20
Building Construction (SE)	Generator Sets	0	8.00	84	0.74
Building Construction (SE)	Plate Compactors	4	8.00	8	0.43
Building Construction (SE)	Skid Steer Loaders	2	8.00	65	0.37
Building Construction (SE)	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Building Construction (SE)	Welders	4	8.00	46	0.45
Paving/Landscape (SE)	Bore/Drill Rigs	2	8.00	221	0.50
Paving/Landscape (SE)	Concrete/Industrial Saws	2	8.00	81	0.73
Paving/Landscape (SE)	Pavers	1	8.00	130	0.42
Paving/Landscape (SE)	Paving Equipment	1	8.00	132	0.36
Paving/Landscape (SE)	Rollers	1	8.00	80	0.38
Paving/Landscape (SE)	Skid Steer Loaders	4	8.00	65	0.37
Paving/Landscape (SE)	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading (SW) - 2019	16	0.00	10.00	15,624.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (SW) - 2020	16	0.00	10.00	22,233.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Demolition (NW)	8	0.00	0.00	340.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (SW)	20	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (NW) - 2020	17	0.00	10.00	24,754.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (SW)	25	0.00	82.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (NW) - 2021	17	0.00	10.00	9,246.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (NW)	28	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (NW)	43	0.00	183.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (SW)	9	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (NW)	9	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Demolition (SE)	8	0.00	0.00	780.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Grading (SE)	20	0.00	10.00	43,429.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Foundation (SE)	28	0.00	50.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Building Construction (SE)	43	0.00	325.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT
Paving/Landscape (SE)	12	0.00	20.00	0.00	0.05	0.13	0.13	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading (SW) - 2019 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3243	0.0000	0.3243									
Off-Road		6.5681				0.2643	0.2643									
Total		**6.5681**			**0.3243**	**0.2643**	**0.5885**									

Unmitigated Construction Off-Site

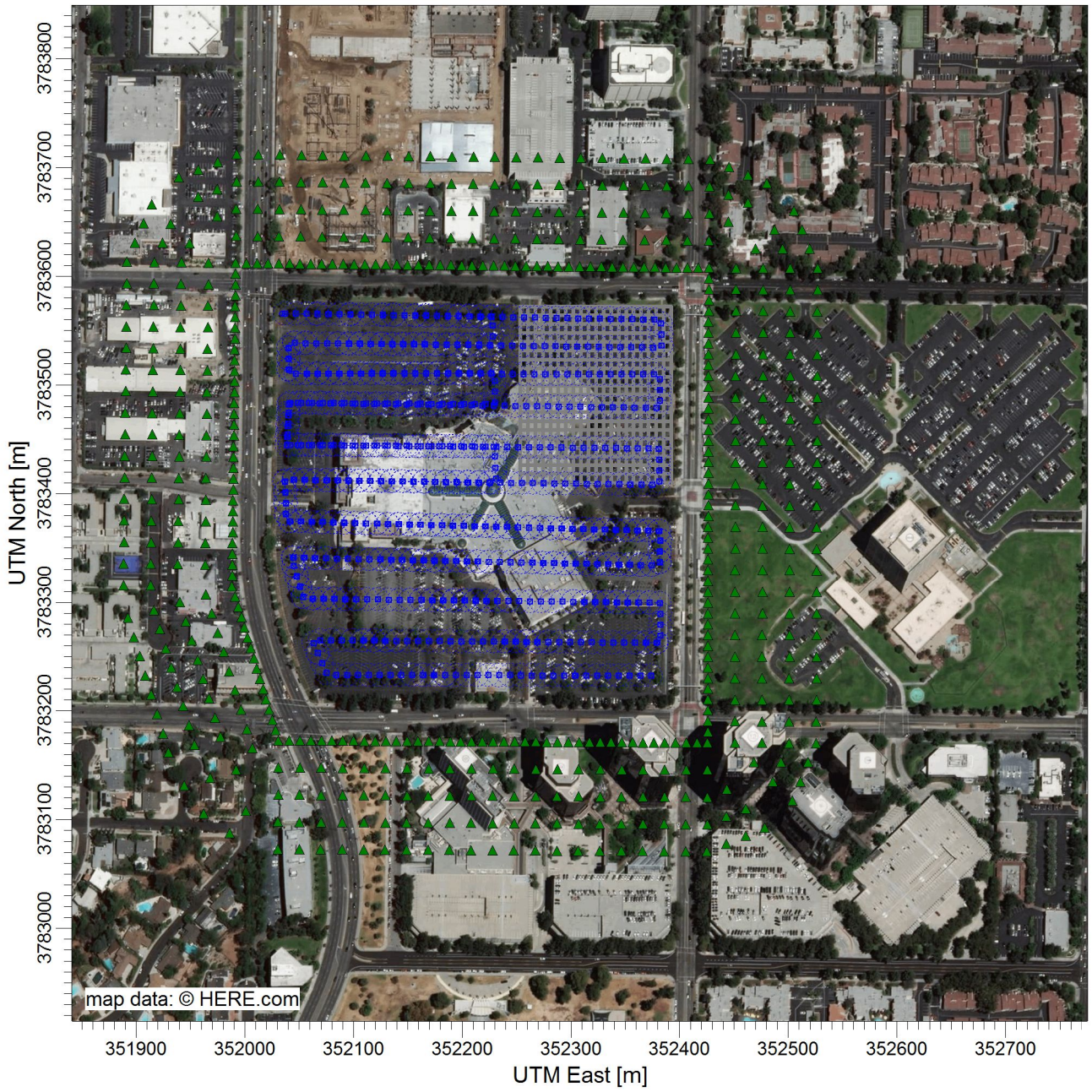
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling		0.7765			1.0400e-003	6.2000e-004	1.6600e-003									

Attachment B

AERMOD Output Summary

PROJECT TITLE:

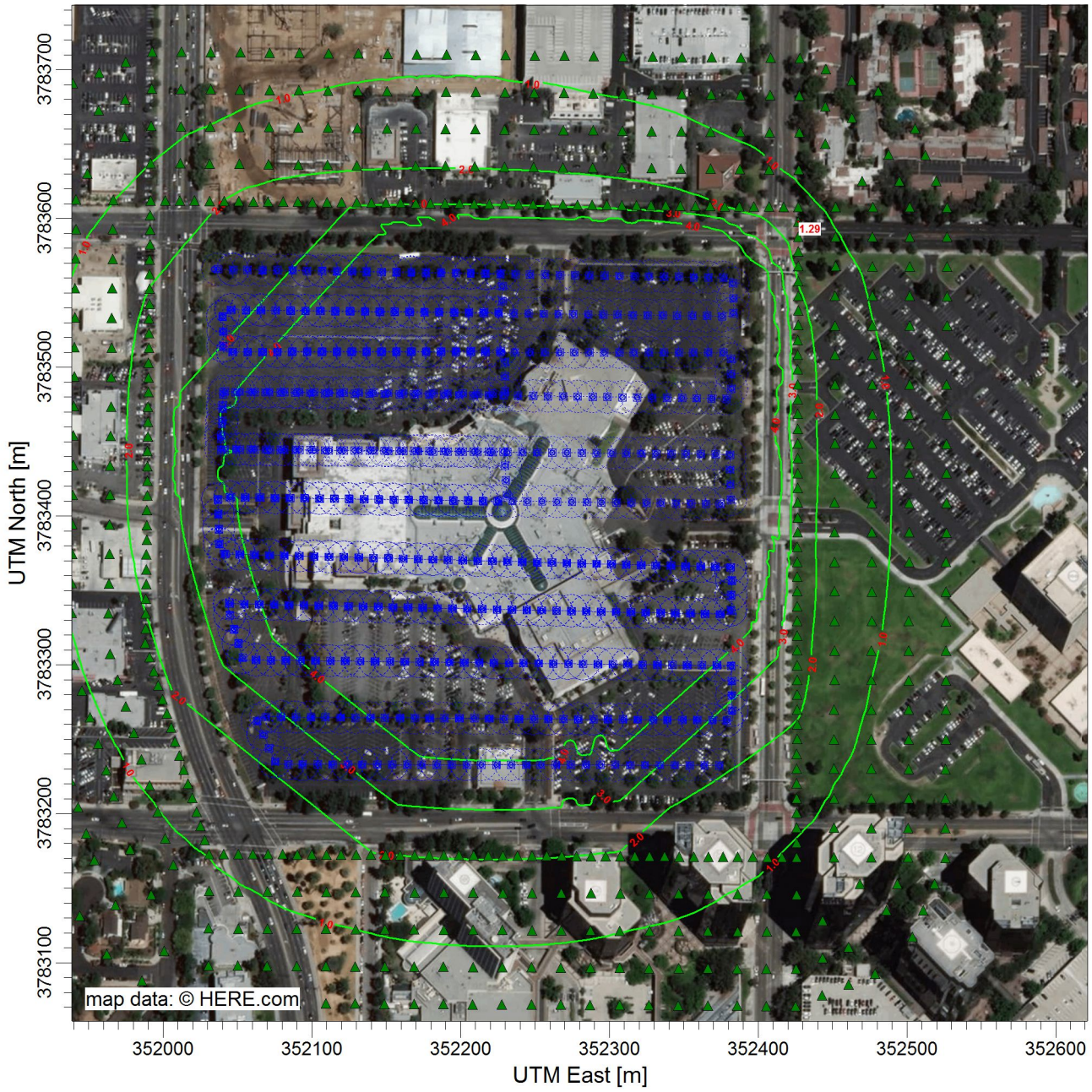
C:\Users\HES\Dropbox\Westfield Promenade\Aermod\Promenade\Promenade.



COMMENTS: Westfield Promenade AERMOD Source-Receptor Configuration	SOURCES: **2**	COMPANY NAME:	
	RECEPTORS: **1019**	MODELER:	
		SCALE: 1:5,879 0 0.2 km	
		DATE: **5/25/2017**	PROJECT NO.:

PROJECT TITLE:

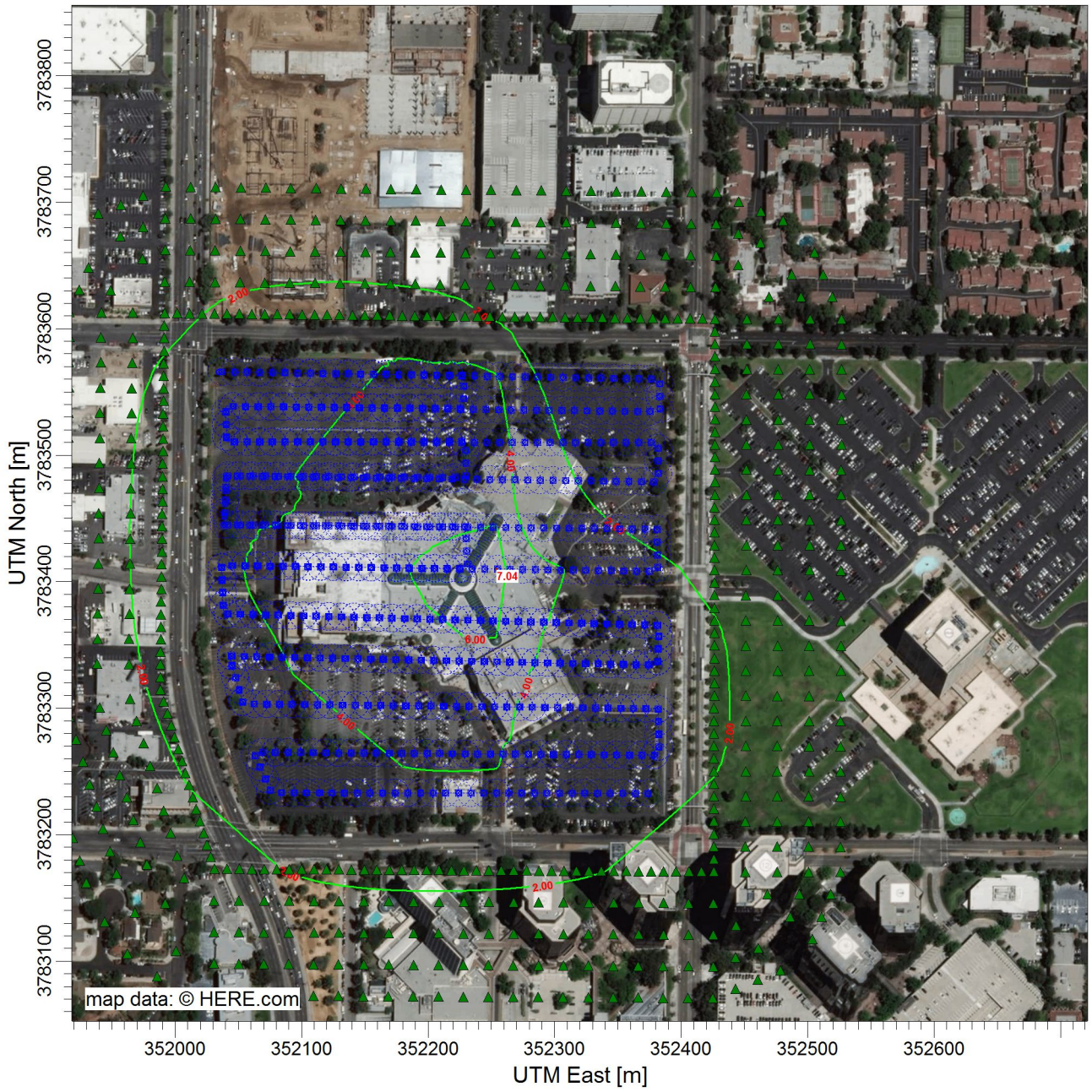
C:\Users\HES\Dropbox\Westfield Promenade\Aermod\Promenade\Promenade.



COMMENTS: Westfield Promenade AERMOD Output - Offsite Impacts (with NorthEast) - Scaler Concentrations @ 1g/s	SOURCES: **2**	COMPANY NAME:	
	RECEPTORS: **1019**	MODELER:	
	OUTPUT TYPE: **Concentration**	SCALE: 1:4,294 0 0.1 km	
	MAX: **12.9 ug/m^3**	DATE: **5/30/2017**	PROJECT NO.:

PROJECT TITLE:

C:\Users\HES\Dropbox\Westfield Promenade\Aermod\Promenade\Promenade.



COMMENTS: Westfield Promenade AERMOD Output - Onsite Impacts (without NorthEast) - Scaler Concentrations @ 1g/s	SOURCES: **2**	COMPANY NAME:	
	RECEPTORS: **1019**	MODELER:	
	OUTPUT TYPE: **Concentration**	SCALE: 1:5,051 0 0.1 km	
	MAX: **7.04 ug/m^3**	DATE: **5/30/2017**	PROJECT NO.:

```
*** AERMOD - VERSION 16216r ***   *** C:\Users\HES\Dropbox\Westfield Promenade\Aermod\Promenade\Promenade. ***        05/25/17
*** AERMET - VERSION  14134 ***   ***                                                                  ***        14:27:01
                                                                                                                 PAGE   1
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  URBAN

                                        ***     MODEL SETUP OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Model Is Setup For Calculation of Average CONCentration Values.

  --  DEPOSITION LOGIC  --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
**Model Uses NO WET DEPLETION.  WETDPLT  =  F

**Model Uses URBAN Dispersion Algorithm for the SBL for   716 Source(s),
  for Total of    1 Urban Area(s):
  Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Allow FLAT/ELEV Terrain Option by Source,
           with      0 FLAT and    716 ELEV Source(s).
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Used.

**Other Options Specified:
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of:  DPM

**Model Calculates  1 Short Term Average(s) of:   1-HR
    and Calculates PERIOD Averages

**This Run Includes:    716 Source(s);       2 Source Group(s); and    1019 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:    716 VOLUME source(s)
                and:      0 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with      0 line(s)


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

**The AERMET Input Meteorological Data Version Date:  14134

**Output Options Selected:
```

```
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   228.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      4.9 MB of RAM.

**Detailed Error/Message File:   Promenade.err
**File for Summary of Results:   Promenade.sum
*** AERMOD - VERSION 16216r ***   *** C:\Users\HES\Dropbox\Westfield Promenade\Aermod\Promenade\Promenade. ***        05/25/17
*** AERMET - VERSION  14134 ***   ***                                                                      ***        14:27:01
                                                                                                                      PAGE   2
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  URBAN

                                           *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                              (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

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



                                 *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                           (METERS/SEC)

                                                1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION 16216r ***   *** C:\Users\HES\Dropbox\Westfield Promenade\Aermod\Promenade\Promenade. ***        05/25/17
*** AERMET - VERSION  14134 ***   ***                                                                      ***        14:27:01
                                                                                                                      PAGE   3
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  URBAN

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

  Surface file:   ..\Original\rese8.sfc                                                           Met Version:  14134
  Profile file:   ..\Original\RESE8.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:        0                  Upper air station no.:     3190
                 Name: UNKNOWN                                    Name: UNKNOWN
```

Year: 2008 Year: 2008

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
08	01	01	1	01	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	287.0	5.5
08	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	285.9	5.5
08	01	01	1	03	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	285.9	5.5
08	01	01	1	04	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	285.4	5.5
08	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	285.4	5.5
08	01	01	1	06	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	285.4	5.5
08	01	01	1	07	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	285.4	5.5
08	01	01	1	08	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	0.56	999.00	999.	-9.0	285.4	5.5
08	01	01	1	09	22.6	-9.000	-9.000	-9.000	54.	-999.	-99999.0	0.50	1.00	0.32	999.00	999.	-9.0	285.9	5.5
08	01	01	1	10	71.8	-9.000	-9.000	-9.000	147.	-999.	-99999.0	0.50	1.00	0.24	999.00	999.	-9.0	288.1	5.5
08	01	01	1	11	111.2	-9.000	-9.000	-9.000	357.	-999.	-99999.0	0.50	1.00	0.21	999.00	999.	-9.0	289.2	5.5
08	01	01	1	12	128.1	-9.000	-9.000	-9.000	571.	-999.	-99999.0	0.50	1.00	0.20	999.00	999.	-9.0	290.4	5.5
08	01	01	1	13	127.4	-9.000	-9.000	-9.000	712.	-999.	-99999.0	0.50	1.00	0.20	999.00	999.	-9.0	290.4	5.5
08	01	01	1	14	109.8	-9.000	-9.000	-9.000	763.	-999.	-99999.0	0.50	1.00	0.21	999.00	999.	-9.0	290.9	5.5
08	01	01	1	15	52.2	-9.000	-9.000	-9.000	786.	-999.	-99999.0	0.50	1.00	0.25	999.00	999.	-9.0	290.4	5.5
08	01	01	1	16	27.2	-9.000	-9.000	-9.000	796.	-999.	-99999.0	0.50	1.00	0.33	999.00	999.	-9.0	289.2	5.5
08	01	01	1	17	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	0.59	999.00	999.	-9.0	288.1	5.5
08	01	01	1	18	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	287.0	5.5
08	01	01	1	19	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	287.0	5.5
08	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	287.0	5.5
08	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	285.9	5.5
08	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	287.0	5.5
08	01	01	1	23	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	287.0	5.5
08	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.50	1.00	1.00	999.00	999.	-9.0	285.9	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
08	01	01	01	5.5	0	-999.	-99.00	287.1	99.0	-99.00	-99.00
08	01	01	01	9.1	1	-999.	-99.00	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 16216r *** *** C:\Users\HES\Dropbox\Westfield Promenade\Aermod\Promenade\Promenade. *** 05/25/17
*** AERMET - VERSION 14134 *** *** *** 14:27:01
PAGE 4

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV URBAN

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
NENWSWSE	1ST HIGHEST VALUE IS	12.87021 AT (352253.61, 3783523.50, 252.20, 252.20, 0.00)	GC	NEGRID
	2ND HIGHEST VALUE IS	12.86484 AT (352260.55, 3783523.50, 252.20, 252.20, 0.00)	GC	NEGRID
	3RD HIGHEST VALUE IS	12.85002 AT (352267.49, 3783523.50, 252.20, 252.20, 0.00)	GC	NEGRID
	4TH HIGHEST VALUE IS	12.81891 AT (352274.43, 3783523.50, 252.10, 252.10, 0.00)	GC	NEGRID

```
          5TH HIGHEST VALUE IS      12.80542 AT (  352281.37,  3783523.50,   252.10,   252.10,    0.00)  GC  NEGRID
          6TH HIGHEST VALUE IS      12.78025 AT (  352288.31,  3783523.50,   252.10,   252.10,    0.00)  GC  NEGRID
          7TH HIGHEST VALUE IS      12.74737 AT (  352295.25,  3783523.50,   252.10,   252.10,    0.00)  GC  NEGRID
          8TH HIGHEST VALUE IS      12.71249 AT (  352302.19,  3783523.50,   252.10,   252.10,    0.00)  GC  NEGRID
          9TH HIGHEST VALUE IS      12.66454 AT (  352309.13,  3783523.50,   252.10,   252.10,    0.00)  GC  NEGRID
         10TH HIGHEST VALUE IS      12.60310 AT (  352316.07,  3783523.50,   252.10,   252.10,    0.00)  GC  NEGRID

NWSWSE    1ST HIGHEST VALUE IS       7.04219 AT (  352253.61,  3783409.96,   253.60,   253.60,    0.00)  GC  NEGRID
          2ND HIGHEST VALUE IS       6.90308 AT (  352253.61,  3783418.07,   253.50,   253.50,    0.00)  GC  NEGRID
          3RD HIGHEST VALUE IS       6.71366 AT (  352253.61,  3783426.18,   253.40,   253.40,    0.00)  GC  NEGRID
          4TH HIGHEST VALUE IS       6.44436 AT (  352253.61,  3783434.29,   253.20,   253.20,    0.00)  GC  NEGRID
          5TH HIGHEST VALUE IS       6.15068 AT (  352260.55,  3783409.96,   253.60,   253.60,    0.00)  GC  NEGRID
          6TH HIGHEST VALUE IS       6.10531 AT (  352253.61,  3783442.40,   253.10,   253.10,    0.00)  GC  NEGRID
          7TH HIGHEST VALUE IS       5.86512 AT (  352260.55,  3783418.07,   253.50,   253.50,    0.00)  GC  NEGRID
          8TH HIGHEST VALUE IS       5.75783 AT (  352253.61,  3783491.06,   252.50,   252.50,    0.00)  GC  NEGRID
          9TH HIGHEST VALUE IS       5.75046 AT (  352253.61,  3783450.51,   253.10,   253.10,    0.00)  GC  NEGRID
         10TH HIGHEST VALUE IS       5.73621 AT (  352253.61,  3783499.17,   252.50,   252.50,    0.00)  GC  NEGRID


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 16216r ***   *** C:\Users\HES\Dropbox\Westfield Promenade\Aermod\Promenade\Promenade. ***        05/25/17
 *** AERMET - VERSION  14134 ***   ***                                                                    ***        14:27:01
                                                                                                                    PAGE   5
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  URBAN

                                          *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***


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

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

NENWSWSE HIGH   1ST HIGH VALUE IS     183.51714  ON 09121116: AT (  352253.61,  3783523.50,   252.20,   252.20,    0.00)  GC  NEGRID

NWSWSE   HIGH   1ST HIGH VALUE IS     125.82730  ON 09121116: AT (  352253.61,  3783409.96,   253.60,   253.60,    0.00)  GC  NEGRID


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 16216r ***   *** C:\Users\HES\Dropbox\Westfield Promenade\Aermod\Promenade\Promenade. ***        05/25/17
 *** AERMET - VERSION  14134 ***   ***                                                                    ***        14:27:01
                                                                                                                    PAGE   6
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  URBAN

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

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

```
 A Total of            0 Fatal Error Message(s)
 A Total of            1 Warning Message(s)
 A Total of         1173 Informational Message(s)

 A Total of        43848 Hours Were Processed

 A Total of            2 Calm Hours Identified

 A Total of         1171 Missing Hours Identified (  2.67 Percent)


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


    ********   WARNING MESSAGES   ********
RE W213     182       RECART: ELEV Input Inconsistent With Option: Input Ignored       NEGRID
```

Attachment C

Risk Summary

Westfield Promenade
Construction Health Risk Assessment
Health Risk Calculations

Source	*Mass GLC*				*Weight Fraction*	*Contaminant*	*Exposure Duration (Years)*	*Carcinogenic Hazard*			*Noncarcinogenic Hazard / Toxicological Endpoints**		
	(µg/m3) (1 g/s)	*DPM Emissions (g/s)*	*Adjusted Concentration (µg/m3)*	*(mg/m3)*				*URF (µg/m3)$^{-1}$*	*CPF (mg/kg/day)$^{-1}$*	*RISK*	*REL (µg/m3)*	*RfD (mg/kg/day)*	*RESP*
(a)					*(d)*	*(e)*		*(f)*	*(g)*	*(h)*	*(i)*	*(j)*	*(k)*
With Import-Off-Site	1.29	0.0059	0.008	7.6E-06	1.00E+00	Diesel Exhaust Particulate	6.8	3.0E-04	1.1E+00	2.12E-07	5.0E+00	1.4E-03	2.5E-04
No Import-Off-Site	1.29	0.0053	0.007	6.8E-06	1.00E+00	Diesel Exhaust Particulate	6.4	3.0E-04	1.1E+00	1.90E-07	5.0E+00	1.4E-03	2.1E-04
With Import-On-Site NE	7.0	0.0048	0.034	3.4E-05	1.00E+00	Diesel Exhaust Particulate	6.8	3.0E-04	1.1E+00	9.35E-07	5.0E+00	1.4E-03	1.1E-03
No Import-On-Site NE	7.0	0.0047	0.033	3.3E-05	1.00E+00	Diesel Exhaust Particulate	5.7	3.0E-04	1.1E+00	9.09E-07	5.0E+00	1.4E-03	8.9E-04
						DPM Total			Maximum	**0.9**	in a million		1.09E-03

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	365
inhalation rate (L/kg-body weight*day)	271.0
averaging time(cancer) (days)	25550
averaging time(noncancer) (days)	14600