IV. Environmental Impact Analysis
B. Air Quality

1. Introduction

This section of the Draft EIR addresses the air emissions generated by construction and operation of the Project. The analysis also addresses the consistency of the Project with the air quality policies set forth within the South Coast Air Quality Management District (SCAQMD)'s Air Quality Management Plan (AQMP) and the City of Los Angeles General Plan. The analysis of Project-generated air emissions focuses on whether the Project would cause an exceedance of an ambient air quality standard or SCAQMD significance threshold. Calculation worksheets, assumptions, and model outputs used in the analysis are included in Appendix C of this Draft EIR.

2. Environmental Setting

a. Air Quality Background

The Project is located within the South Coast Air Basin (Air Basin), an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and San Diego County to the south. The Air Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The regional climate within the Air Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Air Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

Air pollutant emissions within the Air Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either

on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment such as when high winds suspend fine dust particles.

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect the public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety, and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them. The national and state criteria pollutants and the applicable ambient air quality standards are listed in Table IV.B-1 on page IV.B-3.

b. Air Pollution and Potential Health Effects

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality within the Air Basin. The criteria air pollutants, for which national and state standards have been enacted and which are most relevant to current air quality planning and regulation in the Air Basin, are ozone (O_3), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), lead (Pb), sulfur dioxide (SO_2), hydrogen sulfide (H_2S), and vinyl chloride (VC). In addition, volatile organic compounds (VOCs) and toxic air contaminants (TACs) are of concern in the Air Basin. Each of these is briefly described below.

(1) Criteria Pollutants

(a) Ozone (O_3)

O_3 is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X)—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of O_3 irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are

Table IV.B-1
Ambient Air Quality Standards

Pollutant	Averaging Time[a]	California Standard[a]	Federal Standard[b]	SCAQMD Attainment Status[c]	
				California Standard[d]	Federal Standard[e]
Ozone (O_3)	1-hour	0.09 ppm (180 µg/m^3)	—	Non-Attainment (Extreme)	—
	8-hour	0.07 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Non-Attainment	Non-Attainment
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	150 µg/m^3	Non-Attainment	Attainment
	Annual	20 µg/m^3	—		
Fine Particulate Matter ($PM_{2.5}$)	24-hour	—	35 µg/m^3	Non-Attainment	Non-Attainment
	Annual	12 µg/m^3	12 µg/m^3		
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Attainment	Unclassified/ Attainment
	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)		
Nitrogen Dioxide (NO_2)	1-hour	0.18 ppm (339 µg/m^3)	0.10 ppm (188 µg/m^3)	Attainment	Unclassified/ Attainment
	Annual	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)		
Lead (Pb)	30-day average	1.5 µg/m^3	—	Attainment	Non-Attainment
	Rolling 3-month average	—	0.15 µg/m^3		
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	Attainment	Attainment
	3-hour	—	0.5 ppm (1,300 µg/m^3)		
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)		
	Annual	—	0.03 ppm (80 µg/m^3)		
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	—	Unclassified	—
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m^3)	—	Unclassified	—
Sulfates	24-hour	25 µg/m^3	—	Attainment	—

ppm = parts per million by volume

µg/m^3 = micrograms per cubic meter

[a] *An ambient air quality standard is a concentration level expressed in either parts per million or*

Table IV.B-1 (Continued)
Ambient Air Quality Standards

Pollutant	Averaging Time[a]	California Standard[a]	Federal Standard[b]	SCAQMD Attainment Status[c]	
				California Standard[d]	Federal Standard[e]

micrograms per cubic meter and averaged over a specific time period (e.g., 1 hour). The different averaging times and concentrations are meant to protect against different exposure effects. Some ambient air quality standards are expressed as a concentration that is not to be exceeded. Others are expressed as a concentration that is not to be equaled or exceeded.

[b] *California Air Resources Board, Ambient Air Quality Standards Chart, last reviewed May 4, 2016.*

[c] *"Attainment" means that the regulatory agency has determined, based on established criteria, that the Air Basin meets the identified standard. "Non-attainment" means that the regulatory agency has determined that the Air Basin does not meet the standard.*

[d] *California standard attainment status based on 2015 State Area Designations maps (www.arb.ca.gov/desig/adm/adm.htm), last reviewed May 5, 2016, accessed January 16, 2017.*

[e] *Federal standard attainment status based on 2015 National Area Designations maps (www.arb.ca.gov/desig/adm/adm.htm), last reviewed May 5, 2016, accessed January 16, 2017.*

Source: Eyestone Environmental, 2016.

more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

(b) Particulate Matter (PM_{10} and $PM_{2.5}$)

The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than 10 microns (PM_{10}) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

(c) Carbon Monoxide (CO)

CO is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea,

dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

(d) Nitrogen Dioxide (NO_2)

NO_2 is a byproduct of fuel combustion and major sources include power plants, large industrial facilities, and motor vehicles. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), which reacts quickly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 absorbs blue light and results in a brownish-red cast to the atmosphere and reduced visibility. NO_2 also contributes to the formation of PM_{10}. Nitrogen oxides irritate the nose and throat, and increase one's susceptibility to respiratory infections, especially in people with asthma. NO_X is also a precursor to the formation of ozone.

Effective April 12, 2010, the United States Environmental Protection Agency (USEPA) set a new 1-hour NO_2 standard at 0.10 part per million (188 $\mu g/m^3$).[1] To attain this standard, the three-year average of the 98th percentile of the daily maximum 1-hour average must not exceed 0.10 ppm. The USEPA cited evidence that short-term NO_2 exposures could contribute to adverse respiratory effects, including increased asthma symptoms, worsened control of asthma, and an increase in respiratory illnesses and symptoms. The USEPA also identified that NO_2 concentrations on or near major roads can be approximately 30 to 100 percent higher than concentrations in the surrounding community, which could contribute to health effects for at-risk populations, including people with asthma, children, and the elderly.

(e) Sulfur Dioxide (SO_2)

Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. SO_2 potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

[1] *USEPA, Final Revisions to the Primary National Ambient Air Quality Standard for Nitrogen Dioxide (NO_2), General Overview, Office of Air and Radiation Office of Air Quality Planning and Standards, January 2010, p. 11-12.*

(f) Lead (Pb)

Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

(g) Hydrogen Sulfide (H_2S)

H_2S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. H_2S can also be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the state standard could result in exposure to a very disagreeable odor.

(h) Vinyl Chloride (VC)

VC is a chemical building block, or monomer, used in the production of polyvinyl chloride (PVC). PVC is used to make materials, including pipes, used in the construction, packaging, electrical, and transportation industries. Major sources of VC include PVC production and fabrication facilities and, at the other end of PVC's life cycle, as PVC deteriorates, landfills and publicly-owned treatment works. VC is carcinogenic. Exposure to VC has been associated with a rare cancer, liver angiosarcoma, in workers, and with tumors of the liver, lungs, mammary glands and the nervous system in animals. VC is primarily of concern as a carcinogenic TAC at hot spots. It is regulated as a TAC to allow implementation of health-protective control measures at levels below the ambient standard.[2]

(2) Precursor to Criteria Pollutants

Volatile organic compounds (VOC) are typically formed from combustion of fuels and/or released through evaporation of organic liquids. Some VOCs are also classified by the state as TACs. While there are no specific VOC ambient air quality standards, VOC is a prime component (along with NO_X) of the photochemical processes by which such criteria pollutants as O_3, NO_2, and certain fine particles are formed. They are, thus, regulated as "precursors" to formation of those criteria pollutants.

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[2] *CARB, Proposed Identification of Vinyl Chloride as a Toxic Air Contaminant, Staff Report/Executive Summary, October 1990.*

(3) Toxic Air Contaminants (TACs)

TACs refer to a diverse group of "non-criteria" air pollutants that can affect human health but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above but because their effects tend to be local rather than regional. TACs are classified as carcinogenic and non-carcinogenic. Non-carcinogenic TAC can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular).

The California Air Resources Board (CARB)[3] and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. A complete list of these substances is maintained on CARB's website.[4]

Diesel particulate matter (DPM), which is emitted in the exhaust from diesel engines, was listed by the state as a TAC in 1998. DPM has historically been used as a measure of exposure for all diesel exhaust emissions. DPM consists of fine particles. Fine particles have a diameter of less than 2.5 micrometer (μm), and include a subgroup of ultrafine particles that have a diameter of less than 0.1 μm. Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, DPM exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations; (4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease.[5,6]

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[3] *CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both state and federal air pollution control programs within California.*

[4] *CARB, Toxic Air Contaminant Identification List, www.arb.ca.gov/toxics/id/taclist.htm, last reviewed July 18, 2011, accessed November 30, 2016.*

[5] *CARB, Diesel and Health Research, www.arb.ca.gov/research/diesel/diesel-health.htm, last reviewed April 12, 2016, accessed December 28, 2016.*

CARB maintains a 21-site air toxics monitoring network, which measures outdoor ambient concentration levels of approximately 60 air toxics. CARB has determined that, of the top ten inhalation risk contributors, DPM contributes approximately 68 percent of the total potential cancer risk.[7]

c. Regulatory Framework

The Project Site and vicinity are subject to federal, state, and local air quality laws and regulations. A number of plans and policies have been adopted by various agencies that address air quality concerns. Those laws, regulations, plans, and policies that are relevant to the Project are discussed below.

(1) Criteria Pollutants

(a) Federal

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years, with the most recent amendments in 1990. At the federal level, the USEPA is responsible for implementation of some portions of the CAA (e.g., certain mobile source and other requirements). Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies.

The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the National Ambient Air Quality Standard (NAAQS). These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA which are most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

Title I provisions are implemented for the purpose of attaining NAAQS. Table IV.B-1 on page IV.B-3 shows the NAAQS currently in effect for each criteria pollutant and their relative attainment status. The CAA provides deadlines for meeting the NAAQS within the Air Basin, including the following: (1) 1-hour O_3 by the year 2010; (2) 8-hour O_3 by the year 2024; and (3) $PM_{2.5}$ by the year 2015. The only air monitoring station that is currently exceeding or projected to exceed the 24-hour $PM_{2.5}$ standard is within western Riverside.[8]

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[6] *CARB, Fact Sheet: Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results, March 2008.*

[7] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV) Final Report, 2015.*

[8] *SCAQMD, Final 2012 Air Quality Management Plan.*

Los Angeles County exceeded the lead NAAQS as the result of a large lead-acid battery recycling facility near downtown Los Angeles.

Non-attainment designations are categorized into seven levels of severity: (1) basic; (2) marginal; (3) moderate; (4) serious; (5) severe-15; (6) severe-17; and (7) extreme.[9] On June 11, 2007, the USEPA reclassified the Air Basin as a federal "attainment" area for CO and approved the Air Basin's CO maintenance plan.[10] The Air Basin fails to meet national standards for O_3 and $PM_{2.5}$ and, therefore, is considered a federal "non-attainment" area for these pollutants. In addition, Los Angeles County fails to meet the national standard for lead and, therefore, is considered a federal "non-attainment" area for lead.

Title II of the CAA pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline and automobile pollution control devices are examples of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have been lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

(b) State

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date. CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, CARB conducts research, sets state ambient air quality standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. Table IV.B-1 on page IV.B-3 includes the CAAQS currently in effect for each of the criteria pollutants, as well as other pollutants recognized by the state. As shown in Table IV.B-1, the CAAQS include more stringent standards than the NAAQS.

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[9] *The "-15" and "-17" designations reflect the number of years within which attainment must be achieved.*

[10] *USEPA, "Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes: California, Final Rule." Federal Register 72 (11 May 2007):26718-26721.*

(i) Air Quality and Land Use Handbook[11]

CARB published the *Air Quality and Land Use Handbook* on April 28, 2005 (the "CARB Handbook"), to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of TAC emissions. The recommendations provided in the CARB Handbook are voluntary and do not constitute a requirement or mandate for land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway or within an urban road with 100,000 vehicles per day, or within a rural road with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center/warehouse that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week; and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

(ii) California Code of Regulations

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended or repealed by the state agencies pursuant to the Administrative Procedure Act (APA). The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to 5 minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

(c) Regional

(i) South Coast Air Quality Management District (SCAQMD)

The SCAQMD shares responsibility with CARB for ensuring that all state and federal ambient air quality standards are achieved and maintained throughout all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles. This area includes all of Orange County and Los Angeles County, except for the Antelope Valley; the non-desert portion of western San Bernardino County; and the western and Coachella

[11] *CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.*

Valley portions of Riverside County. The Air Basin is a subregion of the SCAQMD jurisdiction.

To meet the CAAQS and NAAQS, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs). The 2012 AQMP incorporates the latest scientific and technological information and planning assumptions, including the Southern California Association of Governments' (SCAG) 2012–2035 Regional Transportation Plan/ Sustainable Communities Strategy (2012–2035 RTP/SCS) and updated emission inventory methodologies for various source categories.[12] The 2012 AQMP also includes the new federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

The AQMP provides emissions inventories, ambient measurements, meteorological episodes, and air quality modeling tools. The AQMP also provides policies and measures to guide responsible agencies in achieving federal standards for healthful air quality in the Air Basin. It also incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

The SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules may apply to project construction or operation. For example, SCAQMD Rule 403 requires the implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads.

Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with new development projects within the Air Basin such as the Project. Instead, the SCAQMD published the *CEQA Air Quality Handbook* in November 1993 to assist lead agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects proposed in the Air Basin. The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses in Environmental Impact Reports and was used extensively in the preparation of this analysis.

[12] *SCAG's 2016–2040 RTP/SCS is now available. However, the 2012 AQMP is based on the 2012–2035 RTP/SCS.*

The SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* with the *Air Quality Analysis Guidance Handbook*.[13]

In order to assist the CEQA practitioner in conducting an air quality analysis in the interim while the replacement *Air Quality Analysis Guidance Handbook* is being prepared, supplemental guidance/information is provided on the SCAQMD website[14] and includes: (1) the EMission FACtors (EMFAC) model on-road vehicle emission factors; (2) background CO concentrations; (3) localized significance thresholds; (4) mitigation measures and control efficiencies; (5) mobile source toxics analysis; (6) off-road mobile source emission factors; (7) $PM_{2.5}$ significance thresholds and calculation methodology; and (8) updated SCAQMD Air Quality Significance Thresholds. The SCAQMD also recommends using approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod). These recommendations were followed in the preparation of this analysis.

The SCAQMD has also adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TAC emissions.[15] SCAQMD's siting distance recommendations are the same as those provided by CARB, described above. The SCAQMD's document introduces land use-related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

The following SCAQMD rules and regulations would be applicable to the Project:

- SCAQMD Rule 403 requires projects to incorporate fugitive dust control measures at least as effectively as the following measures:
  - Use watering to control dust generation during the demolition of structures;
  - Clean-up mud and dirt carried onto paved streets from the site;

[13] *SCAQMD, Air Quality Analysis Handbook, www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook, accessed November 30, 2016.*

[14] *SCAQMD, Air Quality Analysis Handbook, 1993, www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook, accessed November 30, 2016.*

[15] *SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005.*

- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
- All haul trucks shall be covered or maintain at least 6 inches of freeboard;
- All materials transported offsite shall be either sufficiently watered or securely covered to prevent excessive amounts of spillage or dust;
- Suspend earthmoving operations or additional watering shall be implemented to meet Rule 403 criteria if wind gusts exceed 25 mph;
- The owner or contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable control of dust caused by wind. All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions; and
- An information sign shall be posted at the entrance to the construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. A construction relations officer shall be appointed to act as a community liaison concerning on-site activity, including investigation and resolution of issues related to fugitive dust generation.

- SCAQMD Rule 1113 limits the volatile organic compound content of architectural coatings.
- SCAQMD Regulation XIII, New Source Review, requires new on-site facility nitrogen oxide emissions to be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers and water heaters).

(ii) Southern California Association of Governments (SCAG)

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements, including the Transportation Conformity Rule and other applicable federal, state, and air district laws and regulations. As the federally designated Metropolitan Planning Organization (MPO) for the six-county Southern California region, SCAG is required by law to ensure that transportation activities "conform" to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. In addition, SCAG is a co-producer, with the

SCAQMD, of the transportation strategy and transportation control measure sections of the AQMP for the Air Basin. With regard to future growth, SCAG has prepared the 2012–2035 RTP/SCS, which provides population, housing, and employment projections for cities under its jurisdiction. The growth projections in the 2012–2035 RTP/SCS are based on projections originating under County and City General Plans. The 2012–2035 RTP/SCS growth projections are used in the preparation of the air quality forecasts and consistency analysis included in the SCAQMD's AQMP.

Building off of SCAG's 2012-2035 RTP/SCS, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS) on April 7, 2016.[16] The 2016–2040 RTP/SCS reaffirms the land use policies that were incorporated into the 2012–2035 RTP/SCS.

(d) Local

Local jurisdictions, such as the City of Los Angeles, have the authority and responsibility to reduce air pollution through their police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions.

The Air Quality Element of the City of Los Angeles General Plan was adopted on November 24, 1992, and sets forth the goals, objectives, and policies, which guide the City in the implementation of its air quality improvement programs and strategies. The Air Quality Element acknowledges the interrelationships among transportation and land use planning in meeting the City's mobility and air quality goals.

The Air Quality Element establishes six goals:

- Good air quality in an environment of continued population growth and healthy economic structure;
- Less reliance on single-occupant vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;

[16] *SCAG, 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, adopted April 7, 2016.*

- Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation and air quality;

- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures such as site orientation and tree planting; and

- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

In accordance with CEQA requirements, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City uses the SCAQMD's *CEQA Air Quality Handbook* and SCAQMD's supplemental online guidance/information for the environmental review of plans and development proposals within its jurisdiction.

(2) Toxic Air Contaminants (TAC)

The California Air Toxics Program[17] was established in 1983, when the California Legislature adopted Assembly Bill (AB) 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, CARB and OEHHA determine if a substance should be formally identified, or "listed," as a TAC in California. Since inception of the program, a number of such substances have been listed and include benzene, chloroform, formaldehyde, and particulate emissions from diesel-fueled engines, among others.[18] In 1993, the California Legislature amended the program to identify the 189 federal hazardous air pollutants (HAPs) as TACs.

In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on results of that review, CARB has enacted a number of airborne toxic control measures (ATCMs), both for mobile and stationary sources.[19] In 2004, CARB adopted an ATCM to limit heavy-duty

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[17] *CARB, California Air Toxics Program, www.arb.ca.gov/toxics/toxics.htm, last reviewed September 24, 2015, accessed November 30, 2016.*

[18] *CARB, Toxic Air Contaminant Identification List, www.arb.ca.gov/toxics/id/taclist.htm, last reviewed July 18, 2011, accessed November 30, 2016.*

[19] *CARB, Airborne Toxic Control Measures, www.arb.ca.gov/toxics/atcm/atcm.htm, last reviewed December 1, 2016, accessed January 5, 2017.*

diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In addition to limiting exhaust from idling trucks, CARB adopted regulations on July 26, 2007, for off-road diesel construction equipment such as bulldozers, loaders, backhoes, forklifts, and many other self-propelled off-road diesel vehicles to reduce emissions by installation of diesel particulate filters and encouraging the replacement of older, dirtier engines with newer emission controlled models. Implementation is staggered based on fleet size, with the largest operators beginning compliance in 2014.[20]

The AB 1807 program is supplemented by the AB 2588 Air Toxics "Hot Spots" program, which was established by the California Legislature in 1987. Under this program, facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks if present. In 1992, the AB 2588 program was amended by Senate Bill (SB) 1731 to require facilities that pose a significant health risk to the community to reduce their risk through implementation of a risk management plan.

d. Existing Air Quality Conditions

(1) Regional Air Quality

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Air Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors, such as wind, sunlight, temperature, humidity, rainfall, and topography, affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential.

The greatest air pollution throughout the Air Basin occurs from June through September. This condition is generally attributed to the large amount of pollutant

[20] *CARB, In-Use Off-Road Diesel-Fueled Fleets Regulation, www.arb.ca.gov/msprog/ordiesel/ordiesel.htm, last reviewed July 28, 2016, accessed December 28, 2016.*

emissions, light winds, and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. O_3 concentrations, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert. Over the past 30 years, substantial progress has been made in reducing air pollution levels in Southern California. However, the Air Basin still fails to meet national standards for O_3 and $PM_{2.5}$. In addition, Los Angeles County still fails to meet the national standard for lead.

The SCAQMD has released an Air Basin-wide air toxics study (MATES-IV).[21] The MATES-IV Study was aimed at estimating the cancer risk from toxic air emissions throughout the Air Basin by conducting a comprehensive monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to fully characterize health risks for those living in the Air Basin. The MATES-IV Study concluded that the average carcinogenic risk from air pollution in the Air Basin is approximately 420 in one million over a 70-year duration. Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributors. Approximately 68 percent of the risk is attributed to diesel particulate emissions; 21 percent to other toxics associated with mobile sources including benzene, butadiene, and carbonyls; and 11 percent to stationary sources including large industrial operations, such as refineries and metal processing facilities, as well as smaller businesses, such as gas stations and chrome plating.[22]

As part of the MATES-IV Study, the SCAQMD prepared a series of maps that shows regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps' estimates represent the number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years) in parts of the area. The MATES-IV map is the most recently available map to represent existing conditions near the Project area. The estimated cancer risk for the vast majority of the urbanized area within the Air Basin ranges from 200 to over 1,200 cancers per million over a 70-year duration.[23]

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[21] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV) Final Report, May 2015.*

[22] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV) Final Report, May 2015.*

[23] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV), MATES IV Interactive Carcinogenicity Map, 2015, www3.aqmd.gov/webappl/OI.Web/OI.aspx?jurisdictionID=AQMD.gov&shareID=73f55d6b-82cc-4c41-b779-4c48c9a8b15b, accessed December 2, 2016.*

(2) Local Air Quality

Air pollutant emissions are generated in the local vicinity by stationary and area-wide sources, such as commercial and industrial activity, space and water heating, landscape maintenance, consumer products, and mobile sources primarily consisting of automobile traffic. Motor vehicles are the primary source of pollutants in the local vicinity.

(a) Existing Pollutant Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin and has divided the Air Basin into 27 source receptor areas (SRAs) in which 31 monitoring stations operate. Figure IV.B-1 on page IV.B-19 shows the locations of the SRAs located in Los Angeles County. The Project Site is located within SRA 1, which covers the Central Los Angeles area. The monitoring station most representative of the Project Site is the North Main Street Station, located at 1630 North Main Street in the City of Los Angeles, approximately 6.5 miles southeast of the Project Site. Criteria pollutants monitored at this station include PM_{10}, $PM_{2.5}$, O_3, CO, NO_2, lead, and sulfate. Table IV.B-2 on page IV.B-20 identifies the national and state ambient air quality standards for relevant air pollutants along with the ambient pollutant concentrations that have been measured in SRA 1 through the period of 2013 to 2015.

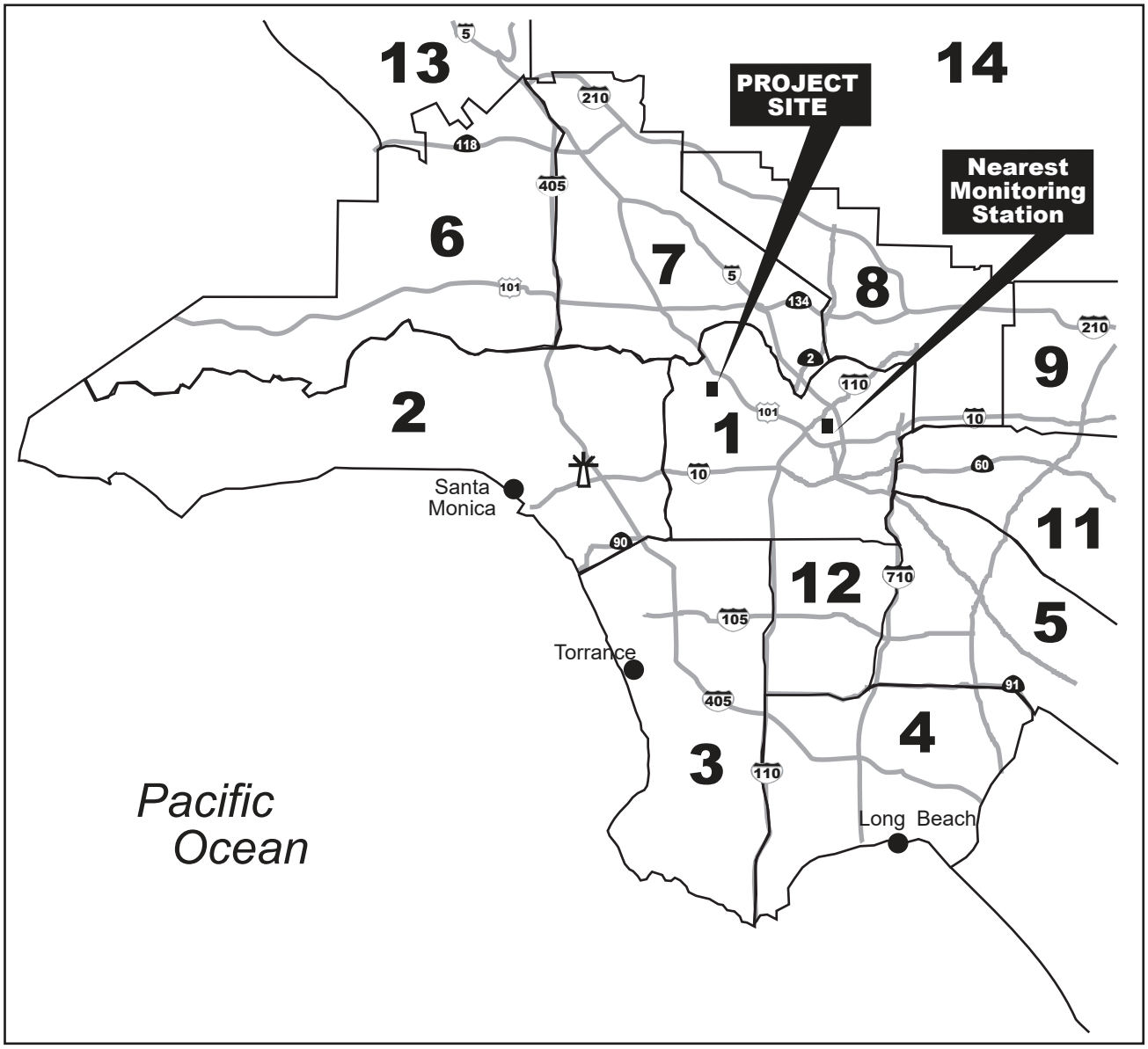
(b) Existing Health Risk in the Surrounding Area

As shown in Figure IV.B-2 on page IV.B-22, based on the MATES-IV model, the calculated cancer risk in the Project area is approximately 1,155 in a million.[24] The cancer risk in this area is predominately related to nearby sources of diesel particulate, such as the Hollywood Freeway (US-101). In general, the risk at the Project Site is comparable with other urbanized areas in Los Angeles.

(c) Surrounding Uses

As shown in Figure IV.B-3 on page IV.B-23, the Project Site is located in a highly urbanized area characterized primarily by neighborhood-serving commercial/retail uses, tourist and entertainment-related commercial/retail uses, offices, hotels, educational institutions, and multi-family residences. With the exception of educational institutions and residences, the primary uses in the Project area are not considered sensitive receptors. In the immediate vicinity of the Project Site are the Blessed Sacrament Church and School, the First Baptist Church, a plant nursery, commercial/retail strip malls, a Rite-Aid pharmacy,

[24] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATESIV), MATES IV Interactive Carcinogenicity Map, 2015, www3.aqmd.gov/webappl/OI.Web/OI.aspx?jurisdictionID=AQMD.gov&shareID=73f55d6b-82cc-4c41-b779-4c48c9a8b15b, accessed December 2, 2016.*



Legend

Northwest Coastal Monitoring Station

Air Monitoring Areas in Los Angeles County	
1. Central Los Angeles	9. East San Gabriel Valley
2. Northwest Coastal	10. Pomona/Walnut Valley
3. Southwest Coastal	11. South San Gabriel Valley
4. South Coastal	12. South Central Los Angeles
5. Southeast Los Angeles County	13. Santa Clarita Valley
6. West San Fernando Valley	14. Antelope Valley
7. East San Fernando Valley	15. San Gabriel Mountains
8. West San Gabriel Valley	

NORTH

0 9

Miles

Figure IV.B-1
SCAQMD Source Receptor Areas—
Central Los Angeles County

Source: South Coast Air Quality Management District Air Monitoring Areas Map, 1989.

Table IV.B-2
Summary of Ambient Air Quality in the Project Vicinity

Pollutant	Year		
	2013	2014	2015
Ozone			
Maximum 1-hour Concentration (ppm)	0.081	0.113	0.104
Days exceeding CAAQS (0.09 ppm)	0	3	2
Maximum 8-hour Concentration (ppm)	0.069	0.094	0.074
Days exceeding NAAQS (0.070 ppm)	0	2	6
Days exceeding CAAQS (0.070 ppm)	0	1	6
Respirable Particulate Matter (PM_{10})			
Maximum 24-hour Concentration (µg/m^3)	57	66	88
Days exceeding NAAQS (150 µg/m^3)	0	0	0
Days exceeding CAAQS (50 µg/m^3)	1	3	26
Annual Arithmetic Mean (µg/m3)	29.5	30.6	33.1
Does measured AAM exceed CAAQS (20 µg/m^3)?	**Yes**	**Yes**	**Yes**
Fine Particulate Matter ($PM_{2.5}$)			
Maximum 24-hour Concentration (µg/m^3)	43.1	59.9	56.4
Days exceeding NAAQS (35 µg/m^3)	1	6	7
Annual Arithmetic Mean (µg/m^3)	11.95	12.36	12.38
Does measured AAM exceed NAAQS (12 µg/m^3)?	No	No	No
Does measured AAM exceed CAAQS (12 µg/m^3)?	No	No	No
Carbon Monoxide (CO)			
Days exceeding NAAQS (35.0 ppm)	0	0	0
Days exceeding CAAQS (20.0 ppm)	0	0	0
Maximum 8-hour Concentration (ppm)	2	3	1.8
Days exceeding NAAQS and CAAQS (9 ppm)	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour Concentration (ppm)	0.09	0.08	0.08
Days exceeding CAAQS (0.18 ppm)	0	0	0
Annual Arithmetic Mean (ppm)	0.022	0.022	0.022
Does measured AAM exceed NAAQS (0.0534 ppm)?	No	No	No
Does measured AAM exceed CAAQS (0.03 ppm)?	No	No	No
Sulfur Dioxide (SO_2)			
Maximum 1-hour Concentration (ppm)	0.01	0.01	0.01
Days exceeding CAAQS (0.25 ppm)	0	0	0
Maximum 24-hour concentration (ppm)	0.003	0.003	0.003
Days exceeding CAAQS (0.04 ppm)	0	0	0
Days exceeding NAAQS (0.14 ppm)	0	0	0
Annual Arithmetic Mean (ppm)	0.001	0.001	0.001
Does measured AAM exceed NAAQS (0.030 ppm)?	No	No	No

Table IV.B-2 (Continued)
Summary of Ambient Air Quality in the Project Vicinity

Pollutant	Year		
	2013	2014	2015
Lead			
Maximum 30-day Average Concentration (µg/m^3)	0.01	0.01	0.01
Does measured concentration exceed NAAQS (1.5 µg/m^3)	No	No	No
Maximum Calendar Quarter Concentration (µg/m^3)	0.01	0.01	0.01
Does measured concentration exceed CAAQS (1.5 µg/m^3)	No	No	No
Sulfate			
Maximum 24-hour Concentration (µg/m^3)	5.8	11.0	6.1
Does measured concentration exceed CAAQS (25 µg/m^3)	No	No	No

ppm = parts per million by volume
µg/m^3 = micrograms per cubic meter
AAM = annual arithmetic mean
— = not available
Source: South Coast Air Quality Management District, Historical Data by Year, www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year, accessed December 22, 2016.

a Panavision office, multi-family apartment buildings, the Los Angeles Recording School, a multi-story office building, and surface parking lots. Several school facilities are located within 0.25 mile of the Project Site, including the Blessed Sacrament School to the east, Hollywood High School to the west, and Selma Avenue Elementary School and its co-located Larchmont Charter School West facility to the north. On the southern boundary of the Project Site, fronting Sunset Boulevard, are a mix of commercial/retail and restaurant uses, and entertainment-related uses. The Hollywood and Highland shopping center and entertainment complex is located less than 1,000 feet north of the Project Site at the northwest corner of Hollywood Boulevard and Highland Avenue. The Metro Red Line Hollywood/Highland Station, part of the Los Angeles County Metropolitan Transportation Authority (Metro) rail system, is also located at this intersection. The Project area is characterized by considerable pedestrian activity.

Some population groups, including children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to air pollution than others. Of the uses mentioned above, the closest sensitive land uses to the Project Site include Hollywood High School across Highland Avenue to the west of Development Parcel A, multi-family residential buildings on the east side of McCadden Place directly south of Development Parcel A, Blessed Sacrament School immediately east of Crossroads of the World and Development Parcel C, Selma Avenue

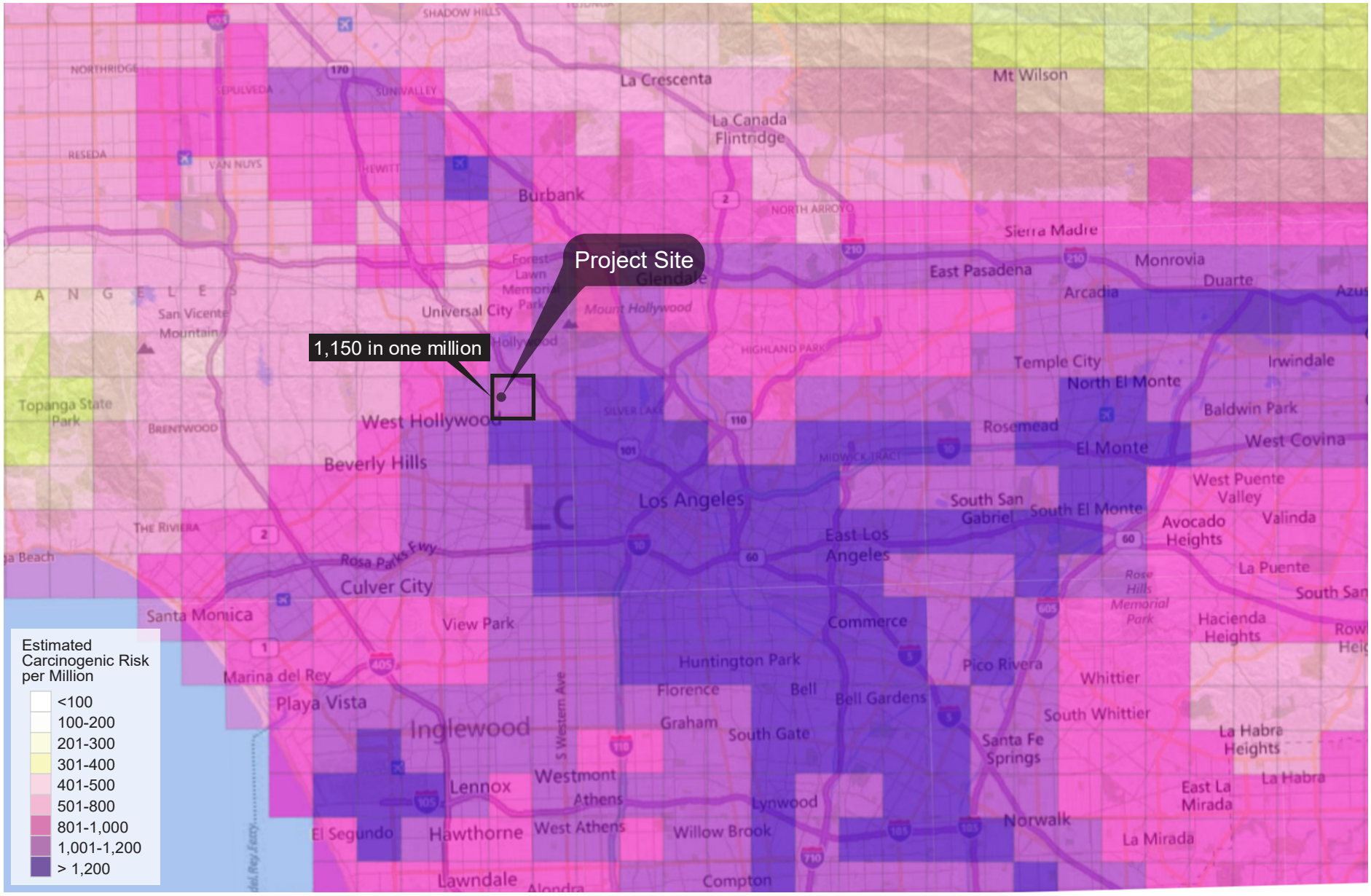


Figure IV.B-2
MATES IV Total Cancer Risk for Project Area

Source: South Coast AQMD, 2016.

Figure IV.B-3
Air Quality Sensitive Receptors Locations

Source: Google Earth, 2015; Skidmore Owings & Merril LLP and Rios Clementi Hale Studios, 2015.

Elementary School and Larchmont Charter School West immediately east of Development Parcel D, and Selma Park farther east of Development Parcel D at Selma Avenue and Schrader Boulevard.

Potential sources of TACs within the Project Site vicinity were found using SCAQMD's Facility Information Database (FIND) search and site reconnaissance to identify potential non-permitted air toxic emitting sources (e.g., freeways, diesel trucks idling at warehouse distribution facilities in excess of 100 trucks per day). Based on this screening analysis, no substantial sources (e.g., gasoline stations, dry cleaners, warehouse distribution) of TAC emissions within the Project Site vicinity were identified.

(d) Existing Project Site Emissions

Mobile source emissions from the existing uses are generated by motor vehicle trips to and from the Project Site. Area source emissions are generated by maintenance equipment, landscape equipment, and use of products that contain solvents. In addition, energy source emissions are associated with building natural gas usage at the Project Site. Table IV.B-3 below presents an estimate of the existing emissions within the Project Site.

Table IV.B-3
Estimated Daily Regional Operational Criteria Pollutant Emissions—Existing Project Site—2015[a]

Emission Source	Pollutant Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	29	1	49	<1	6	6
Energy	<1	<1	<1	<1	<1	<1
Mobile	10	24	98	<1	12	4
Total Existing Emissions[b]	**40**	**25**	**148**	**<1**	**19**	**10**

Numbers may not add up exactly due to rounding.

[a] *Pollutant emissions are calculated using the CalEEMod emissions model.*

[b] *Total existing emissions include uses on the Project Site that will remain.*

Source: Eyestone Environmental, 2016.

3. Project Impacts

a. Methodology

This analysis focuses on the potential change in the air quality environment due to implementation of the Project. Air pollutant emissions would result from both construction

and operation of the Project. Specific methodologies used to evaluate these emissions are discussed below.

(1) Construction Emissions Methodology

(a) Regional Emissions

Daily regional emissions during construction were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from the SCAQMD recommended California Emissions Estimator Model (CalEEMod). Details of the modeling assumptions and emission factors are provided in Appendix C of this Draft EIR. The calculations of the emissions generated during construction activities reflect the types and quantities of construction equipment that would be used to remove the existing buildings and pavement, grade and excavate, construct the proposed buildings and related improvements, and plant new landscaping within the Project Site.

(b) Localized Emissions

The localized effects from the on-site portion of daily emissions were evaluated at sensitive receptor locations potentially impacted by the Project according to the SCAQMD's localized significance thresholds (LST) methodology, which uses on-site mass emissions rate look-up tables and Project-specific modeling, where appropriate.[25] SCAQMD provides LSTs applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. SCAQMD does not provide an LST for SO_2 since land use development projects typically result in negligible construction and long-term operation emissions of this pollutant. Since VOCs are not a criteria pollutant, there is no ambient standard or SCAQMD LST for VOCs. Due to the role VOCs play in O_3 formation, it is classified as a precursor pollutant, and only a regional emissions threshold has been established.

LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The mass rate look-up tables were developed for each source receptor area and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. SCAQMD provides LST mass rate look-up tables for projects with active construction areas that are less than or equal to 5 acres. For projects that exceed 5 acres, such as the Project, the 5-acre LST look-up values can be used as a screening tool to

[25] *SCAQMD, LST Methodology Appendix C-Mass Rate LST Look-up Table, revised October 2009.*

determine which pollutants require detailed analysis.[26] This approach is conservative as it assumes that all on-site emissions would occur within a 5-acre area and would over-predict potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If the project exceeds the LST look-up values, then the SCAQMD recommends that project-specific air quality modeling must be performed. Please refer to Section d.(1)(b) below for the analysis of localized impacts from on-site construction activities.

(2) Operational Emissions Methodology

(a) Regional Emissions

Analysis of the Project's likely impact on regional air quality during long-term Project operations (i.e., after construction is complete) takes into consideration four types of emissions sources: (1) area; (2) energy; (3) mobile; and (4) stationary. Area source emissions are generated by, among other things, landscape equipment, fireplaces, and the use of consumer products. Energy source emissions are generated as a result of activities in buildings for which natural gas is used (e.g., natural gas for heat or cooking). Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site. Stationary source emissions are generated form proposed emergency generators during routine maintenance/testing.

Similar to construction, SCAQMD's CalEEMod software was used for the evaluation of Project emissions during operation and was supplemented for potential on-site sources that are not included in the model (e.g., emergency generator). CalEEMod was used to calculate area, energy, and mobile source emissions. Diesel Emergency generator emissions were calculated using USEPA's Compilation of Air Pollutant Emission Factors (AP-42) and SCAQMD Best Available Control Technology (BACT) requirements. To determine if a significant air quality impact would occur, the net increase in regional operational emissions generated by the Project was compared against the SCAQMD's significance thresholds.[27] Please refer to Appendix C for additional information regarding methodology.

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[26] *Telephone Conversation, Ian MacMillan, SCAQMD CEQA Program Supervisor, November 10, 2011.*

[27] *SCAQMD, SCAQMD Air Quality Significance Thresholds, revised March 2015. SCAQMD based these thresholds, in part, on the federal Clean Air Act and, to enable defining "significant" for CEQA purposes, defined the setting as the South Coast Air Basin. (See SCAQMD, CEQA Air Quality Handbook, April 1993, pp. 6-1–6-2.)*

(b) Localized Emissions

Localized impacts from Project operations include calculation of on-site emissions (e.g., combustion from natural gas usage) using SCAQMD's recommended CalEEMod and evaluation of these emissions consistent with the SCAQMD's LST methodology. Potential localized CO concentrations from induced traffic at nearby intersections are also addressed.

(3) Toxic Air Contaminants Impacts Evaluation (Construction and Operations)

Potential TAC impacts are evaluated by conducting a qualitative analysis consistent with the CARB Handbook followed by a more detailed analysis (i.e., dispersion modeling), as necessary. The screening-level analysis consists of reviewing the Project to identify any new or modified TAC emissions sources. If the qualitative evaluation does not rule out significant impacts from a new source, or modification of an existing TAC emissions source, a more detailed analysis is conducted. For the detailed analysis, downwind sensitive receptor locations are identified, and site-specific dispersion modeling is conducted to estimate Project impacts.

(4) Existing Conditions Analysis

In August 2013, the California Supreme Court issued an opinion in the case *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority,* 57 Cal. 4th 439 (NFSR) pertaining to the environmental baseline used in an EIR for a long-range transportation improvement project. In the NFSR decision, the Supreme Court held that "nothing in CEQA precludes an agency... from considering both types of baseline—existing and future conditions—in its primary analysis of the project's significant adverse effects," but if an agency "chooses to evaluate only the impacts on future conditions, foregoing the existing conditions analysis called for under the CEQA Guidelines," the agency needs to justify that choice. The City, as lead agency, has determined that an analysis of future conditions when the Project becomes operational in 2022 would provide the most accurate assessment of the Project's impacts. However, in order to provide for fuller disclosure of potential impacts, and in accordance with the NFSR decision, this analysis also addresses existing conditions without the Project versus with the Project, assuming emission factors for Project buildout based on existing conditions. All analyses were conducted consistent with the methodologies (e.g., same models and calculation procedures) discussed above for Project-specific impacts.

b. Thresholds of Significance

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts with regard to air quality. These questions are as follows:

Would the project:

- Conflict with or obstruct implementation of the applicable air quality plan?
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? Expose sensitive receptors to substantial pollutant concentrations?
- Create objectionable odors affecting a substantial number of people?

(1) Construction

In the context of the questions above from Appendix G of the CEQA Guidelines, the following factors are set forth in the *L.A. CEQA Thresholds Guide* for consideration on a case-by-case basis for evaluation of significance:

(a) Combustion Emissions from Construction Equipment

- Type, number of pieces and usage for each type of construction equipment;
- Estimated fuel usage and type of fuel (diesel, natural gas) for each type of equipment; and
- Emission factors for each type of equipment.

(b) Fugitive Dust—Grading, Excavation and Hauling

- Amount of soil to be disturbed on-site or moved off-site;
- Emission factors for disturbed soil;
- Duration of grading, excavation and hauling activities;
- Type and number of pieces of equipment to be used; and

- Projected haul route.

(c) Fugitive Dust—Heavy-Duty Equipment Travel on Unpaved Road

- Length and type of road;
- Type, number of pieces, weight and usage of equipment; and
- Type of soil.

(d) Other Mobile Source Emissions

- Number and average length of construction worker trips to Project Site, per day; and
- Duration of construction activities.

While these factors are important inputs in determining the amounts and nature of air pollution emissions generated by a project during construction, the specific thresholds of significance for construction air quality emissions are based on the thresholds set forth by the SCAQMD. Specifically, based on criteria set forth in the SCAQMD's *CEQA Air Quality Handbook*,[28] the Project would have a significant impact with regard to construction emissions if any of the following would occur:

- Regional emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 100 pounds per day for NO_X; (2) 75 pounds a day for VOC; (3) 150 pounds per day for PM_{10} or SO_X; (4) 55 pounds per day for $PM_{2.5}$; and (5) 550 pounds per day for CO.
- Maximum on-site daily localized emissions exceed the LST, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 ppm [23,000 µg/m^3] over a 1-hour period or 9.0 ppm [10,350 µg/m^3] averaged over an 8-hour period) and NO_2 (0.18 ppm [339 µg/m^3] over a 1-hour period, 0.1 ppm [188 µg/m^3] over a three-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm [57 µg/m^3] averaged over an annual period).
- Maximum on-site localized PM_{10} or $PM_{2.5}$ emissions during construction exceed the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed the incremental 24-hour threshold of 10.4 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.

[28] *SCAQMD, SCAQMD Air Quality Significance Thresholds, revised March 2015.*

(2) Operation

In the context of the questions from Appendix G of the CEQA Guidelines, the *L.A. CEQA Thresholds Guide* states that a project would normally have a significant impact on air quality from project operations if any of the following would occur:

- Operational emissions exceed 10 tons per year of volatile organic gases or any of the following SCAQMD prescribed threshold levels: (1) 55 pounds a day for VOC; (2) 55 pounds per day for NO_X; (3) 550 pounds per day for CO; (4) 150 pounds per day for PM_{10} or SO_X; and (5) 55 pounds per day for $PM_{2.5}$.[29]

- Maximum on-site daily localized emissions exceed the LST, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 ppm over a 1-hour period or 9.0 ppm averaged over an 8-hour period) and NO_2 (0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm averaged over an annual period).[30]

- Maximum on-site localized operational PM_{10} and $PM_{2.5}$ emissions exceed the incremental 24-hour threshold of 2.5 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.[31]

- The Project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively; or

- The Project creates an odor nuisance pursuant to SCAQMD Rule 402.

(3) Toxic Air Contaminants

In the context of the questions from Appendix G of the CEQA Guidelines, the *L.A. CEQA Thresholds Guide* sets forth the following factors for consideration on a case-by-case basis in making a determination of significance:

- 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;

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

[30] *SCAQMD, Final Localized Significance Threshold Methodology, revised July 2008.*

[31] *SCAQMD, Final-Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds, October 2006.*

- The likelihood and potential level of exposure; and
- The degree to which project design will reduce the risk of exposure.

Based on these factors and criteria set forth in the SCAQMD's *CEQA Air Quality Handbook*, there would be a significant toxic air contaminant impact, if:[32]

- The project results in the exposure of sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0.[33] For projects with a maximum incremental cancer risk between 1 in one million and 10 in one million, a project would result in a significant impact if the cancer burden exceeds 0.5 excess cancer cases.

(4) Consistency with Applicable Air Quality Plans

Section 15125 of the State CEQA Guidelines requires an analysis of project consistency with applicable governmental plans and policies. In accordance with the SCAQMD's *CEQA Air Quality Handbook*,[34] the following questions were used to evaluate the Project's consistency with SCAQMD and SCAG regional plans and policies, including the AQMP.

- Will the Project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations;
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP?
- Will the Project exceed the assumptions utilized in preparing the AQMP? Specifically:
  - Is the Project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;

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[32] *SCAQMD, CEQA Air Quality Handbook, Chapter 6 (Determining the Air Quality Significance of a Project) and Chapter 10 (Assessing Toxic Air Pollutants), April 1993.*

[33] *Hazard index is the ratio of a toxic air contaminant's concentration divided by its Reference Concentration, or safe exposure level. If the hazard index exceeds one, people are exposed to levels of TACs that may pose noncancer health risks.*

[34] *SCAQMD, CEQA Air Quality Handbook, April 1993, p. 12-3.*

- Does the Project include air quality mitigation measures; or
- To what extent is Project development consistent with the AQMP land use policies?

The Project's impacts with respect to these criteria are discussed to assess the consistency with the SCAQMD's AQMP and SCAG regional plans and policies. In addition, the Project's consistency with the City of Los Angeles General Plan Air Quality Element is discussed.

With regard to the above questions from Appendix G of the CEQA Guidelines, as discussed in the Initial Study prepared for the Project, which is included as Appendix A of this Draft EIR, no objectionable odors are anticipated as a result of either construction or operation of the Project. Therefore, no further analysis regarding this significance threshold is provided below.

c. Project Design Features

No specific Project Design Features are proposed with regard to air quality. The Project would incorporate Project Design Features C-1 through C-4 to support and promote environmental sustainability as discussed under Section IV.C, Greenhouse Gas Emissions, of this Draft EIR. While these features are designed primarily to reduce greenhouse gas emissions, they would also serve to reduce criteria air pollutants.

d. Analysis of Project Impacts

(1) Construction

(a) Regional Construction Impacts

As described in Section II, Project Description, of this Draft EIR, Project construction is anticipated to occur over approximately 48 months and be completed before 2022. Construction of the Project would consist of one month of demolition of existing buildings (excluding Crossroads of the World) and surface parking lots, followed by five months of grading, six months of building/parking structure foundation, 33 months of building construction, and three months of paving, concrete pouring, and landscaping. Construction includes the export of 647,753 cubic yards of soil removal from the Project Site.

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Specifically, the Project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from

construction workers traveling to and from the Project Site. In addition, fugitive dust emissions would result from demolition and construction activities. Mobile source emissions, primarily NO_X, would result from the use of construction equipment, such as dozers, loaders, and cranes. During the finishing phase of a building, paving operations, and the application of architectural coatings (e.g., paints) and other building materials would potentially release VOCs. The assessment of construction air quality impacts considers each of these potential sources.

The emissions levels in Table IV.B-4 on page IV.B-34 represent the highest daily emissions projected to occur during each year of construction. As presented in Table IV.B-4, construction-related daily maximum regional construction emissions (i.e., combined on-site and off-site emissions) would not exceed the SCAQMD daily significance thresholds for VOC, CO, SO_X, PM_{10}, or $PM_{2.5}$. However, maximum regional construction emissions would exceed the SCAQMD daily significance thresholds for NO_X during periods of heavy construction equipment use and export of soil. Therefore, regional construction emissions resulting from the Project would result in a significant short-term impact.

(b) Localized Impacts from On-Site Construction Activities

As discussed above in the methodology subsection, the localized construction air quality analysis was conducted using SCAQMD methodology. Look-up tables provided by the SCAQMD were used to determine localized construction emissions thresholds for the Project.[35] LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are based on the most recent background ambient air quality monitoring data (2013–2015) for the Project area presented in Table IV.B-2 on page IV.B-20. Although the trend shown in Table IV.B-2 demonstrates that ambient air quality is improving in the area, the localized construction emissions analysis conservatively did not apply a reduction in background pollutant concentrations for subsequent years of construction (i.e., 2018–2021).

Maximum on-site daily construction emissions for NO_2 as NO_X, CO, PM_{10}, and $PM_{2.5}$ were calculated using CalEEMod and compared to the applicable SCAQMD LSTs for SRA 1 based on a construction site acreage of 5 acres. Potential impacts were evaluated at the closest sensitive receptor, which is the Larchmont Charter School West immediately east of

[35] *SCAQMD, LST Methodology Appendix C-Mass Rate LST Look-up Table, revised October 2009.*

Table IV.B-4
Unmitigated Estimate of Regional Project Construction Emissions[a]

Construction Year	Pollutant Emissions (pounds per day)					
	VOC[b]	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2018	17	240	173	1	20	9
2019	11	67	100	<1	14	6
2020	61	61	96	<1	14	6
2021	60	56	92	<1	13	5
Maximum Construction Emissions	61	240	173	1	20	9
SCAQMD Daily Significance Thresholds	75	100	550	150	150	55
Over/(Under)	(14)	140	(377)	(149)	(130)	(46)
Exceed Threshold?	No	**Yes**	No	No	No	No

[a] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix C (CalEEMod Output) of this document.*

[b] *Please note that the SCAQMD significance threshold is in terms of VOC while CalEEMod calculates reactive organic compounds (ROG) emissions. For purposes of this analysis, VOC and ROG are used interchangeably since ROG represents approximately 99.9 percent of VOC emissions.*

Source: Eyestone Environmental, 2016.

Development Parcel D. Based on LST methodology, potential impacts at the adjacent school were evaluated using the 25 meter mass rate LST lookup tables.[36]

The unmitigated maximum daily localized emissions from Project construction and LSTs are presented in Table IV.B-5 on page IV.B-35. As presented in Table IV.B-5, maximum localized construction emissions for off-site sensitive receptors would not exceed any of the SCAQMD-recommended localized screening thresholds. As a result, the Project would not result in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO,[37] NO_2,[38] and

[36] *As stated on Page 3-3 of the LST methodology, "[T]he closest receptor distance on the mass rate LST lookup tables is 25 meters. It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.*

[37] *20 ppm [23,000 µg/m^3] over a 1-hour period or 9.0 ppm [10,350 µg/m^3] averaged over an 8-hour period.*

[38] *0.18 ppm [339 µg/m^3] over a 1-hour period, 0.1 ppm [188 µg/m^3] over a three-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm [57 µg/m^3] averaged over an annual period).*

Table IV.B-5
Unmitigated Estimate of Localized Project Construction Emissions[a,b]

Construction Year	Pollutant Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
2018	50	37	9	3
2019	58	48	3	3
2020	53	47	3	3
2021	49	46	2	2
Maximum Daily Localized Emissions	58	48	9	3
SCAQMD LST	89	1,861	16	8
Over/(Under)	(31)	(1,813)	(7)	(5)
Exceed Threshold?	No	No	No	No

[a] *Maximum active construction activities would occur on approximately 5 acres at a distance of approximately 25 meters from sensitive land uses (the shortest distance available for LSTs). Therefore, potential localized construction impacts were evaluated using SCAQMD's LSTs for SRA 1.*

[b] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix C (CalEEMod Output) of this document.*

Source: Eyestone Environmental, 2016.

PM_{10} or $PM_{2.5}$.[39] Therefore, localized construction emissions resulting from the Project would result in a less-than-significant air quality impact.

(c) Toxic Air Contaminants

The greatest potential for TAC emissions during construction would be from diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Because the construction schedule estimates that the phases which require the most heavy-duty diesel vehicle usage, such as site grading/excavation, would last for a much shorter duration (e.g., approximately five months), construction of the Project would not result in a substantial, long-term (i.e., 70-year) source of TAC emissions. Additionally, the SCAQMD CEQA guidance does not require a health risk assessment for short-term construction emissions. It is, therefore, not necessary or meaningful to evaluate long-term cancer impacts from construction activities which occur over a relatively short duration. In

[39] *10.4 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.*

addition, there would be no residual emissions or corresponding individual cancer risk after construction. As such, Project-related TAC impacts during construction would be less than significant.

(2) Operation

(a) Regional Operational Impacts

As discussed above, SCAQMD's CalEEMod was used to calculate regional area, energy, mobile source and stationary source emissions. The Project would incorporate Project Design Features to support and promote environmental sustainability as discussed under Section IV.C, Greenhouse Gas Emissions, of this Draft EIR. While these features are designed primarily to reduce greenhouse gas emissions, they would also serve to reduce criteria air pollutants discussed herein. Project Design Features (i.e., Project Design Features C-1 through C-3) and Mitigation Measure L-1 in Section IV.L, Traffic, Access, and Parking, of this Draft EIR) accounted for in this analysis include the Project Site's accessibility to job centers and transit, increase in diversity of uses and density, limits on the use of fireplaces, and integration of below market rate housing, whose tenants are likely to use public transit and, therefore, reduce VMT and associated air quality emissions. These Project Design Features and mitigation measure are explained further in Section IV.C, Greenhouse Gas Emissions, and Section IV.L, Traffic, Access, and Parking, respectively, of this Draft EIR. Table IV.B-6 on page IV.B-37 provides both Project emissions before and after incorporation of Project Design Features C-1 through C-3 and Mitigation Measure L-1. As shown on Table IV.B-6, emissions resulting from operation of the Project at its projected buildout year of 2022 are expected to exceed the SCAQMD's daily regional operational thresholds for VOC and NO_X. Although incorporation of Project Design Features and Mitigation Measure L-1 would decrease VOC emissions by eight percent and NO_X emissions by 36 percent, air quality impacts from Project operational emissions would remain significant.

An analysis of daily operational regional emissions of existing conditions without the Project versus with the Project was also conducted. The results of these calculations and associated SCAQMD thresholds are presented in Table IV.B-7 on page IV.B-38. As shown in Table IV.B-7, the net overall operational emissions associated with the Project under existing conditions would be greater in comparison to estimated emissions at Project buildout (2022) provided in Table IV.B-6. This increase in emissions from 2015 to 2022 reflects cleaner newer vehicles in future years and not a change in the intensity of use of the Project. The Project under existing conditions would exceed the established SCAQMD threshold levels for VOC and NO_X. The Project under existing conditions (2015) would also exceed the SCAQMD daily regional CO operational threshold. Therefore, air quality impacts from Project operational emissions would also be significant for CO under this scenario. This conclusion assumes that the Project would have been built in 2015, which is

Table IV.B-6
Project Regional Operational Emissions—Buildout (2022)[a]

Emission Source	Pollutant Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project—Without PDFs						
Area	40	<1	30	<1	<1	<1
Energy (Natural Gas)	1	8	6	<1	1	1
Mobile	69	138	630	2	121	34
Emergency Generators	0	3	1	0	0	0
Total Proposed Uses Emissions	110	150	667	2	121	34
Project—With PDFs						
Area	39	<1	30	<1	<1	<1
Energy (Natural Gas)	1	8	6	<1	1	1
Mobile	61	86	451	1	61	17
Emergency Generators	0	3	1	0	0	0
Total Proposed Uses Emissions	101	96	487	1	61	18
SCAQMD Significance Threshold	55	55	550	150	150	55
Over/(Under)	46	41	(63)	(149)	(89)	(37)
Exceed Threshold?	**Yes**	**Yes**	No	No	No	No
Reduction in Emissions with Incorporation of PDFs	8%	36%	27%	48%	49%	49%

[a] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix C (CalEEMod Output) of this document.*

Source: Eyestone Environmental, 2016.

not based on reality as it would not have existed in 2015, and the actual impact would not occur. Yet, for CEQA purposes and to conservatively disclose potential impacts, the EIR calculates that in addition to VOC and NO_X emissions, CO emissions could be significant as if the Project were to have been developed in 2015.

(b) Localized Impacts from On-Site Operational Activities

Operation of the Project would not introduce any major new sources of air pollution to the Project Site. Emissions estimates for criteria air pollutants from on-site sources are presented in Table IV.B-8 on page IV.B-39. The SCAQMD LST mass rate look-up tables were used to evaluate potential localized impacts. The LST mass rate look-up tables apply to projects that have active areas that are less than or equal to 5 acres in size. Although the Project Site exceeds 5 acres, it was conservatively assumed that all on-site emissions would occur within a 5-acre area. This approach is recommended by SCAQMD for a

Table IV.B-7
Project Regional Operational Emissions—Existing Conditions (2015)[a,b]

Emission Source	Pollutant Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project—Without PDFs						
Area	40	<1	31	<1	<1	<1
Energy (Natural Gas)	1	10	8	<1	1	1
Mobile	106	232	982	2	121	34
Emergency Generators	0	3	1	0	0	0
Total Project Emissions	146	246	1,021	2	122	35
Project—With PDFs						
Area	39	<1	31	<1	<1	<1
Energy (Natural Gas)	1	8	6	<1	1	1
Mobile	93	140	677	1	61	17
Emergency Generators	0	3	1	0	0	0
Total Project Emissions	133	150	715	1	62	18
SCAQMD Significance Threshold	55	55	550	150	150	55
Over/(Under)	78	95	165	(149)	(88)	(37)
Exceed Threshold?	**Yes**[a]	**Yes**[a]	**Yes**[a]	No	No	No
Reduction in Emissions with Incorporation of PDFs	10%	39%	30%	47%	49%	49%

[a] *This conclusion assumes that the Project would be built in 2015, which is hypothetical. Yet, for CEQA purposes and to conservatively disclose potential impacts, the EIR calculates these emissions which could be significant for the VOC, NO_X, and CO threshold if the project was operational in 2015.*

[b] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix C (CalEEMod Output) of this document.*

Source: Eyestone Environmental, 2016.

screening-level analysis and would also over-predict potential localized impacts as more pollutant emissions would occur within a smaller area and within closer proximity to potential sensitive receptors. As shown in Table IV.B-8 on page IV.B-39, on-site operational emissions would not exceed any of the LSTs.

An analysis of daily operational localized on-site emissions of existing conditions without the Project versus with the Project (2015) was also conducted. The results of these calculations and associated SCAQMD thresholds are presented in Table IV.B-9 on page IV.B-40. As shown in Table IV.B-9, the net overall operational on-site emissions associated with the Project under existing conditions (2015) would be similar to the estimated emissions during Project buildout (2022) provided in Table IV.B-8. As with the Project buildout (2022) analysis year, on-site operational emissions under existing

Table IV.B-8
Project Localized Operational Emissions—Buildout (2022)[a,b]

Emission Source	Pollutant Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Project—Without PDFs				
Area	<1	30	<1	<1
Energy (Natural Gas)	8	6	1	1
Emergency Generators	3	1	0	0
On-Site Total	11	37	1	1
Project—With PDFs				
Area	<1	30	<1	<1
Energy (Natural Gas)	8	6	1	1
Emergency Generators	3	1	0	0
On-Site Total	***11***	***37***	***1***	***1***
SCAQMD Significance Threshold[c]	**89**	**1,861**	**4**	**2**
Over/(Under)	**(78)**	**(1,824)**	**(3)**	**(1)**
Exceed Threshold?	**No**	**No**	**No**	**No**

[a] *Operational activities would occur on approximately 5 acres at a distance of approximately 25 meters from sensitive land uses (the shortest distance available for LSTs). Therefore, SCAQMD's LSTs for SRA 1 (5-acre site area at 25 meters) was selected to evaluate potential localized operational impacts.*

[b] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix C (CalEEMod Output) of this document.*

Source: Eyestone Environmental, 2016.

conditions would not exceed any of the LSTs. As a result, the Project would not result in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO,[40] NO_2,[41] and PM_{10} or $PM_{2.5}$.[42] Therefore, localized impacts from on-site emission sources would be less than significant.

[40] *20 parts per million (ppm) over a 1-hour period or 9.0 ppm averaged over an 8-hour period.*

[41] *0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm averaged over an annual period.*

[42] *2.5 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.*

Table IV.B-9
Project Localized Operational Emissions—Existing Conditions (2015)[a,b]

Emission Source	Pollutant Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Project—Without PDFs				
Area	<1	31	<1	<1
Energy (Natural Gas)	10	8	1	1
Emergency Generators	3	1	0	0
On-Site Total	13	40	3	1
Project—With PDFs				
Area	<1	31	<1	<1
Energy (Natural Gas)	8	6	1	1
Emergency Generators	3	1	0	0
On-Site Total	***11***	***38***	***1***	***1***
SCAQMD Significance Threshold	**89**	**1,861**	**4**	**2**
Over/(Under)	**(78)**	**(1,823)**	**(3)**	**(1)**
Exceed Threshold?	**No**	**No**	**No**	**No**

[a] *Operational activities would occur on approximately 5 acres at a distance of approximately 25 meters from sensitive land uses (the shortest distance available for LSTs). Therefore, SCAQMD's LSTs for SRA 1 (5-acre site area at 25 meters) was selected to evaluate potential localized operational impacts.*

[b] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix C (CalEEMod Output) of this document.*

Source: Eyestone Environmental, 2016.

(c) CO "Hot Spots" Analysis

As discussed below, a CO "hot spots" analysis is not needed to determine whether the change in the level of service (LOS) of an intersection in the Project would have the potential to result in exceedances of the CAAQS or NAAQS.

It has long been recognized that CO exceedances are caused by vehicular emissions,[43] primarily when idling at intersections.[44,45] Accordingly, vehicle emissions standards have become increasingly more stringent. Before the first vehicle emission

[43] *USEPA, Air Quality Criteria for Carbon Monoxide, 2000.*

[44] *SCAQMD, CEQA Air Quality Handbook, 1993. Section 4.5.*

[45] *SCAQMD, Final 2003 Air Quality Management Plan.*

regulations, cars in the 1950s were typically emitting about 87 grams of CO per mile.[46] Since the first regulation of CO emissions from vehicles (model year 1966) in California, vehicle emissions standards for CO applicable to light duty vehicles have decreased by 96 percent for automobiles,[47,48] and new cold weather CO standards have been implemented, effective for the 1996 model year.[49] Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (with provisions for certain cars to emit even less).[50] With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on newer models of automobiles, CO concentrations in the SCAQMD have steadily declined.

The analysis prepared for CO attainment in the Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the South Coast Air Basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). As discussed in the 1992 CO Plan, peak CO concentrations in the Air Basin are due to unusual meteorological and topographical conditions and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and AQMPs.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods.[51] The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that of Wilshire Boulevard and Veteran Avenue, which had a daily traffic volume of approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most

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46 *USEPA, Milestones in Auto Emissions Control, 1994.*

47 *National Academy Board on Energy and Environmental Systems, Review of the 21st Century Truck Partnership, 2008, Appendix D: Vehicle Emission Regulations [excerpt from http://books.nap.edu/openbook.php?record_id=12258&page=107].*

48 *Kavanagh, Jason, Untangling U.S. Vehicle Emissions Regulations, 2009, www.edmunds.com/car-technology/untangling-us-vehicle-emissions-regulations.html, accessed January 17, 2017.*

49 *CARB, Title 13, California Code of Regulations, Section 1960.1(f)(2) [for 50,000 mile half-life].*

50 *CARB, California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, adopted August 1999, last amended September 2010.*

51 *SCAQMD, Carbon Monoxide Redesignation Request and Maintenance Plan, February 2005.*

stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day.[52] Metro evaluated the LOS in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found the congested intersection to be operating at Level E during peak morning traffic and Level F during peak afternoon traffic.[53]

At buildout of the Project, the highest average daily trips at an intersection would be approximately 72,268 at the Highland Avenue and Sunset Boulevard intersection, which is below the daily traffic volumes that would be expected to generate CO exceedances as evaluated in the 2003 AQMP. This daily trip estimate is based on the peak hour conditions of the intersection. There is no reason unique to the meteorology of the Air Basin to conclude that the CO concentrations at the Highland Avenue and Sunset Boulevard intersection would exceed the 1-hour or 8-hour CO standard if modeled in detail based on the studies undertaken for the 2003 AQMP. Therefore, the Project would not cause any new or exacerbate any existing CO hotspots to exceed the 1-hour or 8-hour CO standard, and, as a result, impacts related to localized mobile-source CO emissions would be less than significant. The supporting data for this analysis are included in Appendix C.

(d) Toxic Air Contaminants Impacts Evaluation

(i) On-Site Sources

When considering potential air quality impacts under CEQA, consideration is given to the location of sensitive receptors within close proximity of land uses that emit TACs. CARB has published and adopted the *Air Quality and Land Use Handbook: A Community Health Perspective*, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities).[54] The SCAQMD adopted similar recommendations in its *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*.[55] Together the CARB and SCAQMD guidelines recommend siting distances for both the development of sensitive land uses in proximity to TAC sources and the addition of new TAC sources in proximity to existing sensitive land uses.

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[52] *Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).*

[53] *Metropolitan Transportation Authority, Congestion Management Program for Los Angeles County, 2004 Exhibit 2-6 and Appendix A.*

[54] *CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.*

[55] *SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005.*

The primary sources of potential air toxics associated with Project operations include DPM from delivery trucks associated with the Project's commercial component (e.g., truck traffic on local streets and idling on adjacent streets). However, these activities, and the land uses associated with the Project, are not considered land uses that generate substantial TAC emissions. It should be noted that the SCAQMD recommends that health risk assessments (HRAs) be conducted for substantial sources of DPM (e.g., truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units) and has provided guidance for analyzing mobile source diesel emissions.[56] Based on this guidance, the Project is not considered to be a substantial source of DPM warranting a refined HRA since daily truck trips to the Project Site would not exceed 100 trucks per day or more than 40 trucks with operating transport refrigeration units. In addition, the CARB-mandated ATCM limits diesel-fueled commercial vehicles (delivery trucks) to idle for no more than 5 minutes at any given time, which would further limit DPM emissions.

As the Project would not contain substantial TAC sources and is consistent with the CARB and SCAQMD guidelines, the Project would not result in the exposure of sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0, and potential TAC impacts would be less than significant.

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes (e.g., chrome plating, electrical manufacturing, petroleum refinery). The Project would not include these types of potential industrial manufacturing process sources. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, landscape pesticides, etc.) for the types of proposed land uses would be below thresholds warranting further study under California Accidental Release Program (CalARP). As such, the Project would not release substantial amounts of TACs, and impacts on human health would be less than significant.

(ii) Off-Site Sources

The ambient air environment that currently exists on and around the Project Site would also have the potential to impact the residential uses that would be developed as part of the Project. In December 2015, the California Supreme Court issued an opinion in the case *California Building Industry Association v. Bay Area Air Quality Management District,* Cal. 4th (Case No. S213478) pertaining to the analysis of the existing environment's impact on the residents and guests of proposed projects. In the court

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

decision, the Supreme Court concluded that "CEQA does not generally require an agency to consider the effects of existing environmental conditions on a proposed project's future uses or residents." However, the Supreme Court, in a footnote, also noted that CEQA does not "*prohibit* an agency from considering—as part of an environmental review for a project it proposes to undertake—how existing conditions might impact a project's future users or residents." Therefore, the following provides an analysis of existing off-site sources of TAC and their impact on proposed sensitive receptors on the Project Site.

The *Air Quality and Land Use Handbook: A Community Health Perspective* provides important air quality information about certain types of facilities (e.g., freeways, refineries, rail yards, ports, etc.) that should be considered when siting sensitive land uses such as residences.[57] CARB provides recommended site distances from certain types of facilities when considering siting new sensitive land uses. The recommendations are advisory and should not be interpreted as defined "buffer zones." If a project is within the siting distance, CARB recommends further analysis. Where possible, CARB recommends a minimum separation between new sensitive land uses and existing sources. The potential for these types of facilities to be located near the Project Site is described below.

Potential sources of TACs within the Project Site vicinity were identified using SCAQMD's Facility Information Database (FIND) search and site reconnaissance to identify potential non-permitted air toxic emitting sources (e.g., freeways, diesel trucks idling at warehouse distribution facilities in excess of 100 trucks per day). Based on this screening analysis, no substantial sources (e.g., gasoline stations, dry cleaners, warehouse distribution) of TAC emissions within the Project Site vicinity were identified, and the location of the proposed residential and neighborhood-serving retail and restaurant uses would be consistent with the recommended siting distances (e.g., no sensitive receptors within 500 feet of a freeway[58]) provided in the CARB and SCAQMD guidance documents discussed above. Therefore, the Project would not result in the exposure of sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0, and TAC impacts would be less than significant.

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[57] *CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.*

[58] *In November 2012, the Los Angeles City Planning Commission (CPC) issued an advisory notice (Zoning Information 2427) regarding the siting of sensitive land uses within 1,000 feet of freeways. The CPC deemed 1,000 feet to be a conservative distance to evaluate projects that house populations considered to be more at-risk from the negative effects of air pollution caused by freeway proximity. The CPC advised that applicants of projects requiring discretionary approval, located within 1,000 feet of a freeway and contemplating residential units and other sensitive uses (e.g., hospitals, schools, retirement homes, etc.) perform a Health Risk Assessment (HRA). The Project Site is not within 1,000 feet of a freeway and, therefore, would not be subject to this notice and warrant the preparation of an HRA.*

(3) SCAQMD CEQA Air Quality Handbook Policy Analysis

The following analysis addresses the Project's consistency with SCAQMD and SCAG policies, inclusive of all local regulatory requirements and Project Design Features discussed in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR. In accordance with the procedures established in the SCAQMD's *CEQA Air Quality Handbook*, the following criteria are required to be addressed in order to determine the Project's consistency with SCAQMD and SCAG policies:

- Will the project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations;
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Will the project exceed the assumptions utilized in preparing the AQMP?

(a) Potential Air Quality Violations or Delay of Attainment of AAQS

With respect to the first criterion, as discussed in the preceding Section IV.B.3.d, localized concentrations of NO_2, CO, PM_{10}, and $PM_{2.5}$ have been analyzed for the Project. SO_2 emissions would be negligible during construction and long-term operations and, therefore, would not have the potential to cause or affect a violation of the SO_2 ambient air quality standard. Since VOCs are not a criteria pollutant, there is no ambient standard or localized threshold for VOCs. Due to the role VOCs play in O_3 formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.

Particulate matter is the primary pollutant of concern during construction activities, and, therefore, the Project's PM_{10} and $PM_{2.5}$ emissions during construction were analyzed: (1) to ascertain potential effects on localized concentrations; and (2) to determine if there is a potential for such emissions to cause or affect a violation of the ambient air quality standards for PM_{10} and $PM_{2.5}$. The results of the analyses indicate that the increases in PM_{10} and $PM_{2.5}$ emissions during construction would not exceed the SCAQMD-recommended significance thresholds at sensitive receptors in proximity to the Project Site.

Additionally, the Project's maximum potential NO_X and CO daily emissions during construction were analyzed to ascertain potential effects on localized concentrations and to determine if there is a potential for such emissions to cause or affect a violation of an applicable ambient air quality standard. As shown in Table IV.B-5 on page IV.B-35, NO_X and CO would not exceed the SCAQMD-recommended significance thresholds and would

not have a long-term impact on the region's ability to meet federal and state air quality standards. Therefore, Project construction would not result in a significant impact with regard to localized air quality.

Because the Project would not introduce any substantial stationary sources of emissions, CO is the preferred benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations.[59] As indicated earlier, no intersections would require a CO hotspot analysis, and impacts would be less than significant. Therefore, no violations of the state and federal CO standards are projected to occur.

As discussed above, an analysis of potential localized operational impacts from on-site activities was conducted. As shown above in Table IV.B-8 on page IV.B-39, localized CO, NO_2 as NO_X, PM_{10}, and $PM_{2.5}$ operational impacts would be less than significant.

(b) Exceed the Assumptions Utilized in Preparing the AQMP

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the Air Basin focuses on the attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the Project exceeds the assumptions utilized in preparing the forecasts presented in the AQMP. Determining whether or not a Project exceeds the assumptions reflected in the AQMP involves the evaluation of three criteria: (1) consistency with the population, housing, and employment growth projections; (2) Project mitigation measures; and (3) appropriate incorporation of AQMP land use planning strategies. The following discussion provides an analysis of each of these three criteria.

- Is the Project consistent with the population, housing, and employment growth projections upon which AQMP forecasted emission levels are based?

A project is consistent with the AQMP, in part, if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the 2012 AQMP, two sources of data form the basis for the projections of air

[59] *SCAQMD, CEQA Air Quality Handbook, Chapter 12, Assessing Consistency with Applicable Regional Plans, April 1993.*

pollutant emissions: the City of Los Angeles General Plan and SCAG's *Regional Transportation Plan (RTP)*. In April 2012, SCAG adopted the 2012–2035 RTP/SCS, which is included in the 2012 AQMP. The 2012–2035 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. For purposes of using the most current available data, the 2012–2035 RTP/SCS data were used in this analysis. Please refer to Section IV.H, Land Use, of this Draft EIR for additional information regarding the Project's consistency with the 2012–2035 RTP/SCS.

According to SCAG's 2012–2035 RTP/SCS, the forecasted population for the City of Los Angeles Subregion would increase by approximately 136,020 persons between 2015 and 2022.[60] The residential component of the Project would consist of 866 net new residential units and would introduce approximately 2,113 new residents to the Project Area.[61] The 2,113 estimated new residents would represent approximately 1.55 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2015 and 2022. In addition, the forecasted housing supply for the City of Los Angeles Subregion is projected to increase by approximately 83,537 households.[62] Thus, the Project's new residential units would constitute up to 1.04 percent of the housing growth forecasted between 2015 and 2022. In addition, forecasted employment for the City of Los Angeles Subregion is projected to increase by approximately 46,255 jobs between 2015 and 2022.[63] The Project is projected to result in a net increase of up to approximately 1,000 employees, or approximately 2.16 percent of the total job growth project for the Los Angeles Subregion through 2022. Such levels of population, housing, and employment growth are consistent with the employment forecasts for the subregion as adopted by SCAG. Because these same projections form the basis of the 2012 AQMP, the Project would be consistent with the projections in the AQMP.

- Does the project include mitigation measures?

The Project would comply with all applicable regulatory standards as required by the SCAQMD. The Project also would incorporate Project Design Features C-1 through C-4 and Mitigation Measure L-1 to support and promote environmental sustainability as discussed in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR. While these

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[60] *Based on 2015 data and linear interpolation of 2020–2035 data (for 2022).*

[61] *Conservatively based on a household size of 2.44 persons.*

[62] *Based on 2015 data and linear interpolation of 2020–2035 data (for 2022).*

[63] *Based on 2015 data and linear interpolation of 2020–2035 data (for 2022).*

features are designed primarily to reduce greenhouse gas emissions, they would also serve to reduce the criteria air pollutants discussed herein. As shown in Table IV.B-6 on page IV.B-37, these Project Design Features and Mitigation Measure L-1 would reduce criteria pollutant emissions as follows: (1) VOC by 8 percent; (2) NO_X by 36 percent; (3) CO by 27 percent; (4) SO_X by 48 percent; and (5) PM_{10} and $PM_{2.5}$ by 49 percent. As such, the Project meets this AQMP consistency criterion.

- To what extent is Project development consistent with the AQMP land use policies?

As discussed in Section IV.H, Land Use, of this Draft EIR, the Project would serve to implement a number of land use policies of the City of Los Angeles and SCAG. With regard to land use developments, such as the Project, air quality policies focus on the reduction of vehicle trips and vehicle miles traveled (VMT). The Project is based on principles of smart growth and environmental sustainability, as evidenced in its mixed-use nature, the accessibility of public transit and multimodal transit options, and the availability of existing infrastructure to service the proposed uses, as described below.

The Project Site is located approximately 0.13 mile from the Metro Red Line Hollywood/Highland Station. In addition, approximately 27 Metro and LADOT bus lines serve the Project Site area,[64] including 20 Metro bus lines, 4 Dash bus lines, and 2 LADOT Commuter Express bus lines, and one West Hollywood Cityline. The Project would also provide bicycle storage areas and 1,279 bicycle parking spaces for Project residents and guests. Therefore, the Project would incorporate characteristics that would reduce trips and VMT. The Project characteristics listed below are consistent with the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*,[65] which provides emission reduction values for recommended mitigation measures, and would reduce VMT and vehicle trips to the Project Site. These characteristics would, therefore, result in a corresponding reduction in VMT and associated criteria pollutant emissions. The CAPCOA measures, which exemplify the characteristics of the Project, include the following (a brief description of the Project's relevance to the measure is also provided):

- **Increase Density (LUT-1):** Increased density, measured in terms of persons, jobs, or dwelling units per unit area, reduces emissions associated with transportation as it reduces the distance people travel for work or services and

[64] *The Project Site area includes a geographic area that is generally bounded by US 101 to the north, Western Avenue to the east, Beverly Boulevard to the south, and Crescent Heights Boulevard to the west.*

[65] *California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, 2010.*

provides a foundation for the implementation of other strategies, such as enhanced transit services. The Project would increase the site density from 11 dwelling units per acre and 10 jobs per acre to approximately 119 dwelling units per acre and 208 jobs per acre.

- **Increase Location Efficiency (LUT-2):** Location efficiency describes the location of the Project in relation to the type of urban landscape, such as an urban area, compact infill, or suburban center. In general, compared to the statewide average, a project could realize VMT reductions up to 65 percent in an urban area, up to 30 percent in a compact infill area, or up to 10 percent in a suburban center from land use/location strategies. The Project Site represents an urban/compact infill location within the Hollywood Community Plan Area. The Project Site is served by existing public transportation located within 0.25 mile. The Project Site is also located within the Hollywood Center, which is generally located on both sides of Hollywood and Sunset Boulevards between La Brea Avenue and Gower Street.[66] The Community Plan calls for the Hollywood Center to function as: (1) the commercial center for Hollywood and surrounding communities; and (2) an entertainment center for the entire region. The Community Plan further states that development, combining residential and commercial uses, is especially encouraged in the Hollywood Center. The location efficiency of the Project Site would result in benefits that would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reductions in transportation-related emissions for both the Existing/No Project and Project conditions.

- **Increase Diversity of Urban and Suburban Developments (Mixed-Uses) (LUT-3):** The Project would co-locate complementary commercial and residential land uses in proximity to other existing off-site commercial and residential uses. The Project would also introduce new uses on the Project Site, including a new hotel and increase in open space. The increases in land use diversity and mix of uses on the Project Site would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation (i.e., walking and biking), which would result in corresponding reductions in transportation-related emissions.

- **Increase Destination Accessibility (LUT-4):** The Project would be located in an area that offers access to multiple other nearby retail and entertainment destinations, including Hollywood & Highland Center located approximately 0.13 mile to the northwest of the Project Site. In addition, the Project Site is located within 5.5 miles of Downtown Los Angeles, a primary job center, also easily accessible by public transportation (including the Metro Red Line, which connects the Hollywood/Highland Station to several stations in Downtown Los Angeles and North Hollywood). The access to multiple destinations in proximity

[66] *City of Los Angeles, Hollywood Community Plan, December 13, 1988, p. HO-2.*

to the Project Site would reduce vehicle trips and VMT compared to the statewide average and encourage walking and non-automotive forms of transportation and would result in corresponding reductions in transportation-related emissions for both the Existing/No Project and Project conditions.

- **Increase Transit Accessibility (LUT-5):** The Project would be located approximately 0.13 mile from the Metro Red Line Hollywood/Highland Station and along several Metro transit and DASH routes. This reduction measure is applicable for both the Existing/No Project and Project conditions. The Project would also provide adequate bicycle parking spaces for residential and commercial uses to encourage the use of alternative modes of transportation.

- **Integrate Affordable and Below Market Rate Housing (LUT-6):** Below market rate housing provides greater opportunity for people to live closer to job centers and to accommodate more people in urban infill areas. The Project would include 84 below market rate (i.e., Very Low Income) dwelling units, which would result in an increase in alternative transit usage and a corresponding reduction in transportation-related emissions.

- **Improve Design of Development (LUT-9)**: The project would include improved design elements including ground floor retail, pedestrian paseos, open space and improved streetscape amenities which would enhance walkability in the project vicinity. The Project would also locate a development in an area with a high level of street accessibility and connectivity. This reduction measure is applicable for both the Existing/No Project and Project conditions.

- **Provide Pedestrian Network Improvements (SDT-1):** Providing links and minimizing barriers to the Project Site to pedestrian-oriented areas and activities would encourage people to walk instead of drive. The Project would provide an internal pedestrian network (i.e., pedestrian paseo) to retail, residential and open space uses to encourage and increase pedestrian activities in the area, which would further reduce VMT and associated transportation-related emissions. Furthermore, the Project would result in an improved and aesthetically appealing streetscape that would promote pedestrian activity, particularly between the Metro Red Line Hollywood/Highland Station and the Hollywood & Highland Center and the Project Site, and thereby enhance the surrounding neighborhood.

- **Traffic Calming Measures (SDT-2):** Providing traffic calming measures encourages people to walk or bike instead of using a vehicle. This mode shift results in a decrease in VMT. Streets within a half mile of the Project Site are equipped with sidewalks, and approximately 25 percent of the intersections include marked crosswalks and/or count-down signal timers. In addition, the Project's realignment of Las Palmas Avenue would improve circulation in the Project vicinity.

The Project results in an approximate 45 percent reduction in VMT as a result of the above measures. As the Project implements the SCAQMD's objective of reducing VMT and the related vehicular air emissions, the proposed Project is consistent with AQMP land use policies.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of the Project on air quality in the Air Basin. While development of the Project would result in short-term regional impacts, Project development would not have a significant long-term impact on the region's ability to meet state and federal air quality standards. The Project would comply with SCAQMD Rule 403 and would implement all feasible mitigation measures for control of NO_X. Also, the Project would be consistent with the goals and policies of the AQMP for control of fugitive dust. As discussed above, the Project's long-term influence would also be consistent with the goals and policies of the AQMP and is, therefore, considered consistent with the SCAQMD's AQMP.

(4) City of Los Angeles Policies

The City of Los Angeles General Plan was prepared in response to California state law requiring that each city and county adopt a long-term comprehensive general plan. This plan must be integrated and internally consistent, and must present goals, objectives, policies, and implementation guidelines for decision makers to use. The City has included an Air Quality Element as part of its General Plan. The planning area for the City's Air Quality Element covers the entire City of Los Angeles, which encompasses an area of approximately 465 square miles.

The 1992 revision to the City's General Plan Air Quality Element serves to aid the greater Los Angeles region in attaining the State and federal ambient air quality standards at the earliest feasible date, while still maintaining economic growth and improving the quality of life. The City's Air Quality Element and the accompanying Clean Air Program acknowledge the inter-relationships between transportation and land use planning in meeting the City's mobility and clean air goals. With the City's adoption of the Air Quality Element and the accompanying Clean Air Program, the City is seeking to achieve consistency with regional Air Quality, Growth Management, Mobility, and Congestion Management Plans.

To achieve these goals, performance based standards have been adopted to provide flexibility in implementation of the policies and objectives of the City's Air Quality Element. The following City Air Quality Element goals, objectives, and policies are relevant to the Project:

Goal 2—Less reliance on single occupant vehicles with fewer commute and non work trips.

Objective 2.1—It is the objective of the City of Los Angeles to reduce work trips as a step toward attaining trip reduction objectives necessary to achieve regional air quality goals.

Policy 2.1.1—Utilize compressed work weeks and flextime, telecommuting, carpooling, vanpooling, public transit, and improve walking/bicycling related facilities in order to reduce vehicle trips and vehicle miles traveled as an employer and encourage the private sector to do the same to reduce work trips and traffic congestion.

Goal 4—Minimize impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.

Objective 4.1—It is the objective of the City of Los Angeles to include regional attainment of ambient air quality standards as a primary consideration in land use planning.

Policy 4.1.1—Coordinate with all appropriate regional agencies in the implementation of strategies for the integration of land use, transportation, and air quality policies.

Objective 4.2—It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.

Policy 4.2.2—Improve accessibility for the City's residents to places of employment, shopping centers, and other establishments.

Policy 4.2.3—Ensure that new development is compatible with pedestrians, bicycles, transit and alternative fuel vehicles.

Policy 4.2.4—Require that air quality impacts be a consideration in the review and approval of all discretionary projects.

Policy 4.2.5—Emphasize trip reduction alternative transit and congestion management measures for discretionary projects.

The Project is consistent with the identified policies above of the City of Los Angeles Air Quality Element because it would implement project features that would reduce vehicular trips, reduce VMT, and encourage use of alternative modes of transportation. In addition, the Project's mix of residential and neighborhood-serving commercial uses

located in proximity to existing transportation infrastructure and public transit and multimodal options would result in a reduction of VMT and vehicle trips.

4. Cumulative Impacts

a. Construction

With respect to the Project's construction-period air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies (e.g., SCAQMD Rule 403) to reduce criteria pollutant emissions outlined in the AQMP pursuant to Federal CAA mandates. As such, the Project would comply with any regulatory requirements, including SCAQMD Rule 403, as discussed above. In addition, the Project would comply with adopted AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, all construction projects Basin-wide would comply with these same requirements (i.e., SCAQMD Rule 403 compliance) and would also implement all feasible mitigation measures when significant impacts are identified.

According to the SCAQMD, individual construction projects that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment.[67] Construction-related daily emissions at the Project Site would exceed the SCAQMD's regional significance threshold for NO_X with mitigation, as discussed further below. Consequently, the Project would have a cumulative impact due to construction-related regional NO_X emissions even with incorporation of mitigation measures. In terms of localized air quality impacts, construction of the Project would have a less-than-significant impact with regard to localized emissions; therefore, the Project's localized emissions are not cumulatively considerable.

Similar to the Project, the greatest potential for TAC emissions at each related project would generally involve DPM emissions associated with heavy equipment operations during demolition and grading/excavation activities. Construction activities at each related project would not result in a long-term (i.e., 70-year) substantial source of TAC emissions. Additionally, the SCAQMD CEQA guidance does not require a HRA for short-term construction emissions. As such, cumulative TAC emission impacts during construction would be less than significant.

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[67] *SCAQMD, Cumulative Impacts Working Group, Cumulative Impacts White Paper-Appendix D, August 2003.*

b. Operation

According to the SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants, for which the Air Basin is non-attainment. Operational emissions from Project buildout would exceed the SCAQMD's regional operational thresholds for VOC and NO_X even with incorporation of Project Design Features C-1 through C-3 and Mitigation Measure L-1. Operational emissions for the Project under existing conditions would exceed the SCAQMD's regional operational thresholds for VOC, NO_X, and CO even with incorporation of Project Design Features C-1 through C-3 and Mitigation Measure L-1. These Project Design Features and mitigation measure would serve to reduce criteria pollutant emissions as follows: (1) VOC by 8 percent; (2) NO_X by 36 percent; (3) CO by 27 percent; (4) SO_X by 48 percent; and (5) PM_{10} and $PM_{2.5}$ by 49 percent. Nonetheless, the emissions of non-attainment pollutants and precursors generated by Project operation in excess of the SCAQMD project-level thresholds, for which the Air Basin is non-attainment, would remain cumulatively considerable.

As discussed above, an analysis of potential localized operational impacts from on-site activities was conducted. Based on the analysis, localized NO_2, CO, PM_{10}, and $PM_{2.5}$, operational impacts would not exceed the SCAQMD's thresholds. As such, the potential localized operational impacts from the Project's on-site activities would not be cumulatively considerable.

With respect to TAC emissions, neither the Project nor any of the related projects as described in Section III, Environmental Setting, of this Draft EIR (which are largely residential, retail/commercial, and office uses), would represent a substantial source of TAC emissions, which are typically associated with large-scale industrial, manufacturing, and transportation hub facilities. The Project and related projects would be consistent with the recommended screening level siting distances for TAC sources, as set forth in CARB's Land Use Guidelines, and the Project and related projects would not result in a cumulative impact requiring further evaluation. However, the Project and each of the related projects would likely generate minimal TAC emissions related to the use of consumer products and landscape maintenance activities, among other things. Pursuant to AB 1807, which directs CARB to identify substances as TACs and adopt ATCMs to control such substances, the SCAQMD has adopted numerous rules (primarily in Regulation XIV) that specifically address TAC emissions. These SCAQMD rules have resulted in and will continue to result in substantial Basin-wide TAC emissions reductions. As such, cumulative TAC emissions during long-term operations would be less than significant. In addition, the Project would not result in any substantial sources of TACs that have been identified by CARB's Land Use Guidelines and, thus, would not result in a cumulatively considerable impact.

In conclusion, during construction, the Project would have a cumulative impact to regional emissions; however, localized and TAC emissions would not be cumulatively considerable. Similarly, during operation, the Project would also have a cumulative impact to regional emissions, but localized and TAC emissions would not be cumulatively considerable.

5. Mitigation Measures

The following mitigation measures set forth a program of air pollution control strategies designed to reduce the Project's air quality impacts during construction, particularly those impacts related to NO_X emissions:

Mitigation Measure B-1: All construction equipment shall be properly tuned and maintained in accordance with the manufacturer's specifications. The contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturer's specifications.

Mitigation Measure B-2: Contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall have their engines turned off after 5 minutes when not in use, to reduce vehicle emissions.

Mitigation Measure B-3: Construction activities shall be discontinued during second-stage smog alerts. A record of any second-stage smog alerts and of discontinued construction activities as applicable shall be maintained by the Contractor on-site.

Mitigation Measure B-4: Construction activity shall utilize electricity from power poles or solar power, rather than diesel power generators and/or gasoline power generators. If stationary construction equipment, such as diesel- or gasoline-powered generators, must be operated continuously, such equipment shall be located at least 100 feet from sensitive land uses (e.g., residences, schools, childcare centers, hospitals, parks, or similar uses), whenever possible.

Mitigation Measure B-5: During plan check, the Project representative shall make available to the lead agency and SCAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the grading/excavation/export phase. The inventory shall include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each such unit's certified tier specification, BACT documentation, and CARB or AQMD operating permit shall be provided on-site at the

time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the on-site equipment with the inventory and certified Tier specification and operating permit. Off-road diesel-powered equipment that will be used an aggregate of 40 or more hours during any portion of the construction activities associated with grading/excavation/export phase shall meet the Tier 3 standards. Construction contractors supplying heavy duty diesel equipment greater than 50 horsepower shall be encouraged to apply for AQMD SOON funds. Information including the AQMD website shall be provided to each contractor which uses heavy duty diesel for on-site construction activities.

6. Level of Significance After Mitigation

a. Construction

Implementation of the mitigation measures described above would reduce construction emissions for all pollutants. However, even with the incorporation of mitigation measures, the Project would exceed the SCAQMD regional significance thresholds for NO_X during excavation and grading activities. Regional NO_X emissions would be reduced from 240 pounds per day to 225 pounds per day or 125 pounds over the 100 pounds per day SCAQMD significance threshold. This duration would be limited to approximately five months of the 48-month construction duration or 10 percent of total construction. As such, Project construction would result in significant and unavoidable Project-level and cumulative regional impacts with regard to NO_X emissions, even with incorporation of all feasible mitigation measures.

No significant impacts related to localized emissions during construction are anticipated to occur for the Project. As such, potential Project-level and cumulative localized impacts would be less than significant.

No significant impacts related to TAC emissions during construction are anticipated to occur for the proposed Project. As such, potential Project-level and cumulative TAC impacts would be less than significant.

b. Operations

Although there are no feasible mitigation measures to reduce the Project's impacts from VOC or NO_X emissions, the Project would incorporate Project Design Features C-1 through C-3 and Mitigation Measure L-1 to reduce operational emissions, as discussed under Section IV.C, Greenhouse Gas Emissions, of this Draft EIR. With inclusion of Project Design Features C-1 through C-3 and Mitigation Measure L-1, VOC and NO_X

emissions would be reduced by eight percent and 36 percent, respectively, under the Project buildout analysis year. Under the Project existing conditions (2015), the Project VOC, NO_X, and CO emissions would be reduced by 10 percent, 39 percent, and 30 percent, respectively, with inclusion of Project Design Features C-1 through C-3 and Mitigation Measure L-1. However, as shown above in Table IV.B-6 on page IV.B-37, regional operational emissions associated with Project buildout analysis year still would exceed the SCAQMD daily emission threshold for regional VOC and NO_X after implementation of feasible Project Design Features and Mitigation Measure L-1. Furthermore, the Project under existing conditions (2015) would also exceed the SCAQMD daily regional CO operational threshold. This conclusion assumes that the Project would be built in 2015, which is not based on reality as it would not exist in 2015, and the actual impact would not occur. Yet, for CEQA purposes and to conservatively disclose potential impacts, the EIR calculates that in addition to VOC and NO_X emissions, CO emissions would have a significant and unavoidable Project-level impact on regional and cumulative air quality, for which the Air Basin is non-attainment. With regard to the consistency with the air quality policies set forth in the SCAQMD's AQMP and the City of Los Angeles General Plan Air Quality Element, the Project would have a less-than-significant impact.

The Project is not anticipated to include any substantial TAC emission sources. Specifically, the Project would not result in the exposure of sensitive receptors to carcinogenic or TACs that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0. As such, potential Project-level and cumulative impacts from Project TAC emissions would be less than significant.