IV. Environmental Impact Analysis

F.1 Air Quality

1. Introduction

This section addresses the air emissions generated by construction and operation of the Proposed Project. The analysis also addresses the consistency of the Proposed Project with the air quality policies set forth within the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan, and the City of Los Angeles General Plan. The analysis of Project-generated air emissions focuses on whether the Proposed 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 contained in Appendix M of this Draft EIR.

2. Environmental Setting

a. Air Quality Background

The Proposed 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 and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. 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 San Gorgonio Pass 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, substantial 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 to protect the public health and welfare. 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 standards have been set at levels considered safe to protect 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. The national and state criteria pollutants and the applicable standards are listed in Table IV.F.1-1 on page IV.F.1-3.

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 promulgated and which are most relevant to current air quality planning and regulation in the Air Basin include ozone (O_3), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. In addition, toxic air contaminants (TAC) are of concern in the Air Basin. Each of these is briefly described below.

(1) Criteria Pollutants

(a) Ozone (O_3)

Ozone 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. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of ozone 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 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.

Table IV.F.1-1
Ambient Air Quality Standards

Pollutant	Averaging Period	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)	Revoked	Non-Attainment	—
	8 hour	0.07 ppm (137 µg/m^3)	0.075 ppm[f] (147 µg/m^3)	Non-Attainment	Non-Attainment (Extreme)
Respirable Particulate Matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	Non-Attainment	Non-Attainment (Serious)
	Annual	20 µg/m^3	Revoked	Non-Attainment	—
Fine Particulate Matter ($PM_{2.5}$)	24 hour	—	35 µg/m^3	—	Non-Attainment (Serious)
	Annual	12 µg/m^3	15 µg/m^3	Non-Attainment	Non-Attainment
Carbon Monoxide (CO)	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Attainment	Attainment
	8 hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm (339 µg/m^3)	0.10 ppm (188 µg/m^3)	Attainment	Attainment
	Annual	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	—	Attainment
Lead (Pb)	30-day average	1.5 µg/m^3	—	Non-Attainment	—
	Rolling 3-month average	—	0.15 µg/m^{3g}	—	Non-Attainment
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm (655 µg/m^3)	—	Attainment	—
	3 hour	—	0.5 ppm (1300 µg/m^3)	—	Attainment
	24 hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	Attainment	Attainment
	Annual	—	0.03 ppm (80 µg/m^3)	—	Attainment
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	—

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

Pollutant	Averaging Period	California Standard[a]	Federal Standard[b]	SCAQMD Attainment Status[c]	
				California Standard[d]	Federal Standard[e]
Visibility-Reducing Particles	8 hour	Extinction coefficient of 0.23 per kilometer (visibility of 10 miles or more due to particles when relative humidity is less than 70 percent)	—	Unclassified	—

[a] California standards based on CARB website (www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm).

[b] Federal Standards based on USEPA website (http://epa.gov/air/criteria.html).

[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 CARB website (www.arb.ca.gov/desig/adm/adm.htm).

[e] Federal standard attainment status based on USEPA websites (www.epa.gov/air/oaqps/greenbk/index.html and www.arb.ca.gov/desig/adm/adm.htm).

[f] Effective May 27, 2008, the value became 0.075 ppm, although the 0.08 ppm standard has remained in effect during transition.

[g] On October 2008, EPA amended the NAAQS for lead from 1.5 µg/m^3 to 0.15 µg/m^3 requiring attainment by December 31, 2015, using a rolling 3-month averaged evaluated over a 3- year period.

Source: Matrix Environmental, 2012.

(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 a 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 carbon monoxide 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. The principal concern of NO_X is as 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 parts 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 0.1 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,

[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.*

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.

(f) Lead (Pb)

Emissions of lead have dropped substantially over the past 40 years. The reduction is largely due to the phase-out of lead as an anti-knock agent in gasoline for on-road automobiles. 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, with high concentrations of lead localized to the near vicinity of the stationary sources. 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) Volatile Organic Compounds (VOCs)

VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids. Some VOCs are also classified by the state as toxic air contaminants. 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 ozone, nitrogen dioxide, and certain fine particles are formed. They are thus regulated as "precursors" to formation of those criteria pollutants.

(2) Toxic Air Contaminants (TACs)

TACs, also referred to as hazardous air pollutants (HAPs), 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 noncarcinogenic, where carcinogenic TACs can cause cancer and noncarcinogenic 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) and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. The complete list of such substances is located at www.arb.ca.gov/toxics/id/taclist.htm.

Diesel PM (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 surrogate measure of

exposure for all diesel exhaust emissions. DPM consists of fine particles (fine particles have a diameter less than 2.5 µm), including a subgroup of ultrafine particles (ultrafine particles have a diameter 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.[2]

To provide a perspective on the contribution that DPM has on the overall statewide average ambient air toxics potential cancer risk, CARB evaluated risks from specific compounds using data from CARB's ambient monitoring network. 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 80 percent of the total potential cancer risk.[3]

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, including the Federal Clean Air Act (CAA), California Clean Air Act (CCAA), CARB *Air Quality and Land Use Handbook (2005),* California Renewables Portfolio Standard (RPS) program (2002, Senate Bill [SB] 1078), California Green Building Standards Code, SCAQMD's 2007 Air Quality Management Plan, SCAQMD's *CEQA Air Quality Handbook (1993),* the Southern California Association of Government's 2008 Regional Transportation Plan (RTP), the Air Quality Element of the City of Los Angeles General Plan, and the City's Green Building Code. Those laws,

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[2] *Website www.arb.ca.gov/research/diesel/diesel-health.htm.*

[3] *SCAQMD 2008. "Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-III)." Final Report. South Coast Air Quality Management District, Diamond Bar, California. Executive summary.*

regulations, plans and policies that are relevant to the Proposed Project are described in Appendix G of this Draft EIR.

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 all affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential.

The greatest air pollution impacts throughout the Air Basin occur from June through September. This condition is generally attributed to the large amount of pollutant 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. Ozone 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 Basin fails to meet national standards for ozone, PM_{10}, and $PM_{2.5}$.

The SCAQMD has released an Air Basin-wide air toxics study (MATES III, Multiple Air Toxics Exposure Study, September 2008). The MATES III Study represents one of the most comprehensive air toxics studies ever conducted in an urban environment. The 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 Study concluded that the average carcinogenic risk from air pollution in the Air Basin is approximately 1,200 in one million. Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributors (about 94 percent). Approximately 84 percent of the risk is attributed to diesel particulate emissions, approximately 10 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 5 percent of all carcinogenic risk is attributed to stationary sources (which include industries and other certain businesses, such as dry cleaners and chrome-plating operations).

As part of the MATES III Study, the SCAQMD prepared a series of maps that show 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 III 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 375 to 2,500 cancers per million.[4] Generally, the risk from air toxics is lower near the coastline and it increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

(2) Local Air Quality

Air pollutant emissions are generated in the local vicinity by stationary and area-wide sources, such as space and water heating, landscape maintenance from leaf blowers and lawn mowers, consumer products, and mobile sources, primarily 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.F.1-1 on page IV.F.1-10 shows the locations of the SRAs located in central Los Angeles County. The Proposed 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 3 miles northwest 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.F.1-2 on page IV.F.1-11 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 2008 to 2010.

(b) Existing Health Risk in the Surrounding Area

As shown in Figure IV.F.1-2 on page IV.F.1-13, the Project Site is located within a cancer risk zone of 1,483 in one million. The cancer risk in this area is predominately related to nearby sources of diesel particulate (e.g., Interstates 10 and 5, and State Routes 110, 101, and 60). In general, the cancer risk at the Project Site is comparable with other urbanized areas in the central Los Angeles area that are near substantial diesel sources (e.g., freeways, airports, and ports).

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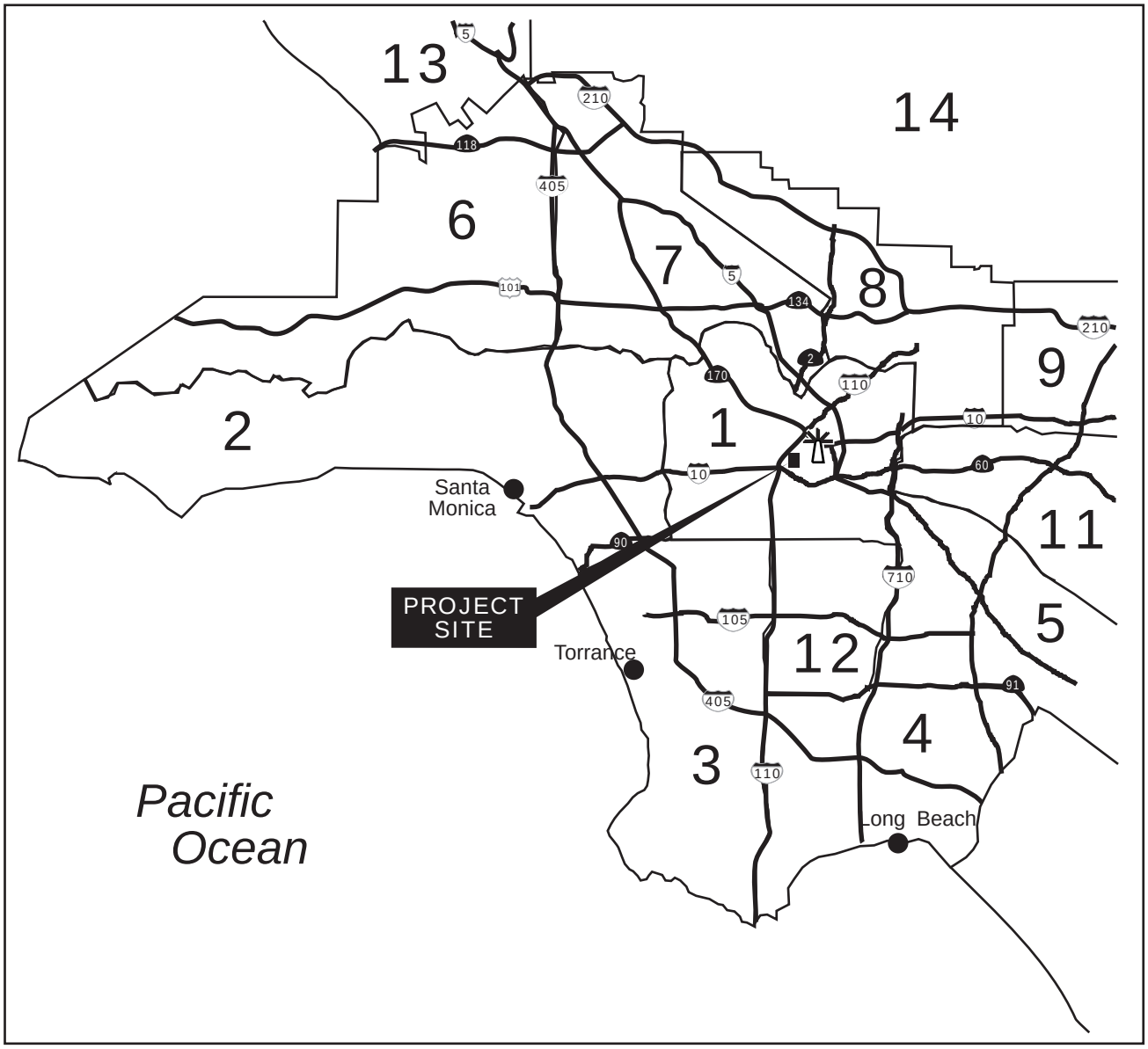
[4] *Website www2.aqmd.gov/webappl/matesiii.*



Legend

North Main Street 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

matrix environmental

Figure IV.F.1-1
SCAQMD Source Receptor Areas

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

Table IV.F.1-2
Summary of Ambient Air Quality in the Project Site Vicinity

Pollutant	Year		
	2008	2009	2010
Ozone			
Maximum 1-hour Concentration (ppm)	0.109	0.139	0.098
Days exceeding NAAQS (0.12 ppm)	0	1	0
Days exceeding CAAQS (0.09 ppm)	3	3	1
Maximum 8-hour Concentration ppm)	0.090	0.100	0.080
Days exceeding NAAQS (0.075 ppm)	3	2	1
Days exceeding CAAQS (0.07 ppm)	7	5	4
Respirable Particulate Matter (PM_{10})			
Maximum 24-hour Concentration (µg/m^3)	66	72	42
Days exceeding NAAQS (150 µg/m^3)	0	0	0
Days exceeding CAAQS (50 µg/m^3)	2	4	0
Annual Arithmetic Mean (µg/m3)	32	33	27
Does Measured AAM exceed NAAQS (50 µg/m^3)?	No	No	No
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)	78	62	39
Days exceeding NAAQS (35 µg/m^3)	10	7	2
Annual Arithmetic Mean (µg/m^3)	16	14	12
Does measured AAM exceed NAAQS (15 µg/m^3)?	Yes	No	No
Does measured AAM exceed CAAQS (12 µg/m^3)?	Yes	Yes	No
Carbon Monoxide (CO)			
Maximum 1-hour Concentration (ppm)	3	3	3
Days exceeding NAAQS (35.0 ppm)	0	0	0
Days exceeding CAAQS (20.0 ppm)	0	0	0
Maximum 8-hour Concentration (ppm)	2.1	2.2	2.3
Days exceeding NAAQS and CAAQS (9 ppm)	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour Concentration (ppm)	0.12	0.12	0.09
Days exceeding CAAQS (0.25 ppm)	0	0	0
Annual Arithmetic Mean (ppm)	0.028	0.028	0.025
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

Table IV.F.1-2 (Continued)
Summary of Ambient Air Quality in the Project Vicinity

Pollutant	Year		
	2008	2009	2010
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
Lead[a]			
Maximum 30-day Average Concentration (µg/m^3)	0.02	0.02	0.02
Does measured concentration exceed CAAQS (1.5 µg/m^3)	No	No	No
Maximum 3-month Rolling Average Concentration (µg/m^3)	0.02	0.02	0.01
Does measured concentration exceed NAAQS (0.15 µg/m^3)	No	No	No
Sulfate			
Maximum 24-hour Concentration (µg/m^3)	14	10	9
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

[a] *The lead-acid battery recycling industry is the only known stationary source category that has the potential to cause violations of the new lead NAAQS (www.aqmd.gov/aqmp/Lead_SIP/1-LeadSIP-Draft_Final.pdf). The Project Site is not located within the potential impacts zone of any of the SCAQMD identified lead-acid battery recycling facilities.*

Source: South Coast Air Quality Management District; California Air Resources Board, Ambient Monitoring Data, 2012.

(c) Sensitive Receptors and Locations

As shown in Figure IV.F.1-3 on page IV.F.1-14, the surrounding Project Site vicinity is heavily urbanized and includes a varied mix of residential, commercial, and industrial uses. Immediately north of the Project Site is L.A. LIVE, an entertainment, hotel, and residential complex. The Figueroa Street corridor that bounds the Project Site to the east is primarily characterized by surface parking lots and auto-related uses with the exception of the City Lights multi-family housing development at the corner of Pico Boulevard and Figueroa Street. Additional multi-family housing developments are proposed on currently existing surface parking lots just north and south of the City Lights development. The Project Site's southern boundary is characterized by auto-related uses. To the west, State Route 110 and its associated landscape berm serves as the Project Site's western boundary. Beyond SR-110, the Pico Union area includes a wide variety of uses, including residential, manufacturing and related industrial, as well as commercial uses.

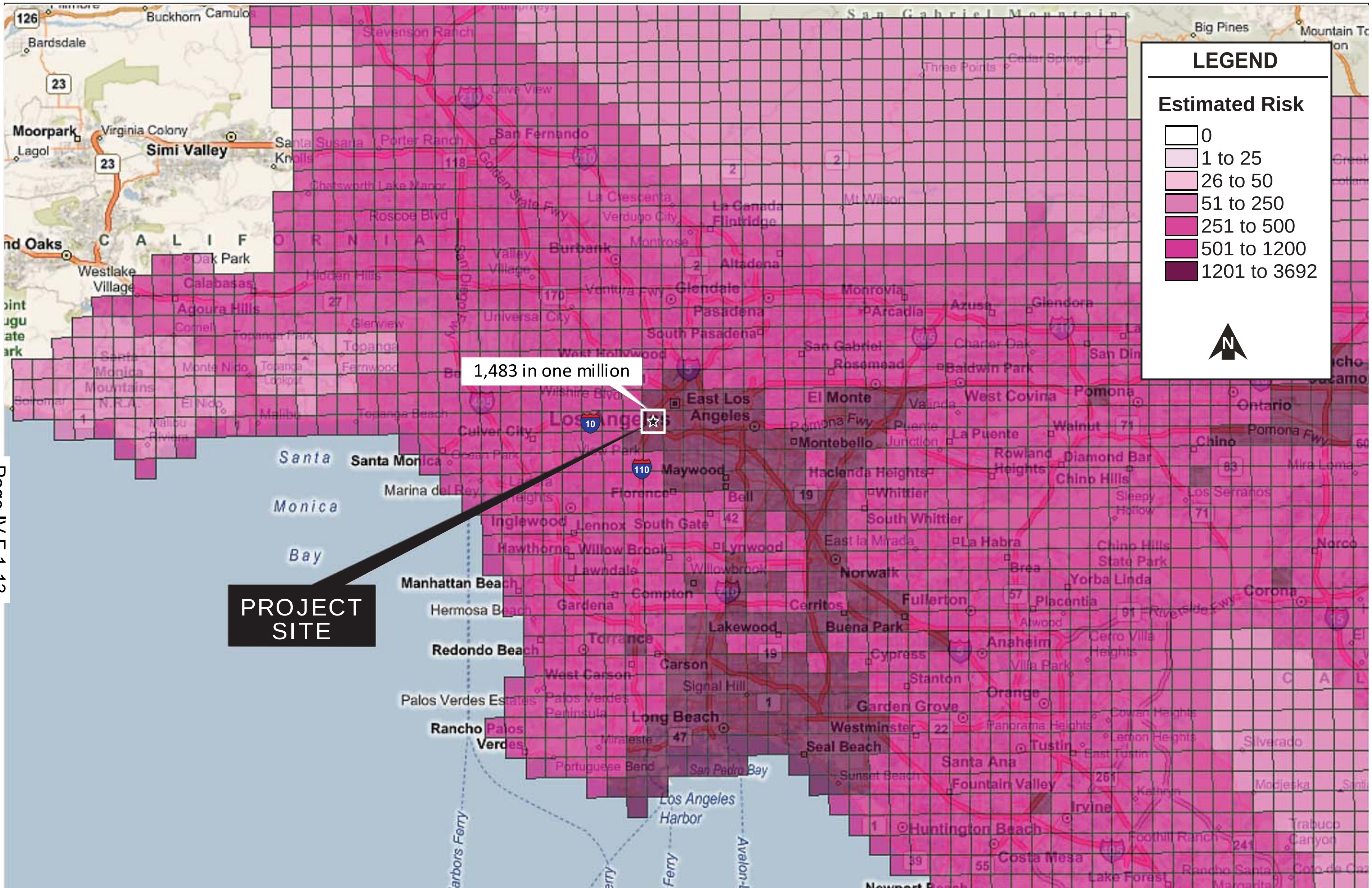


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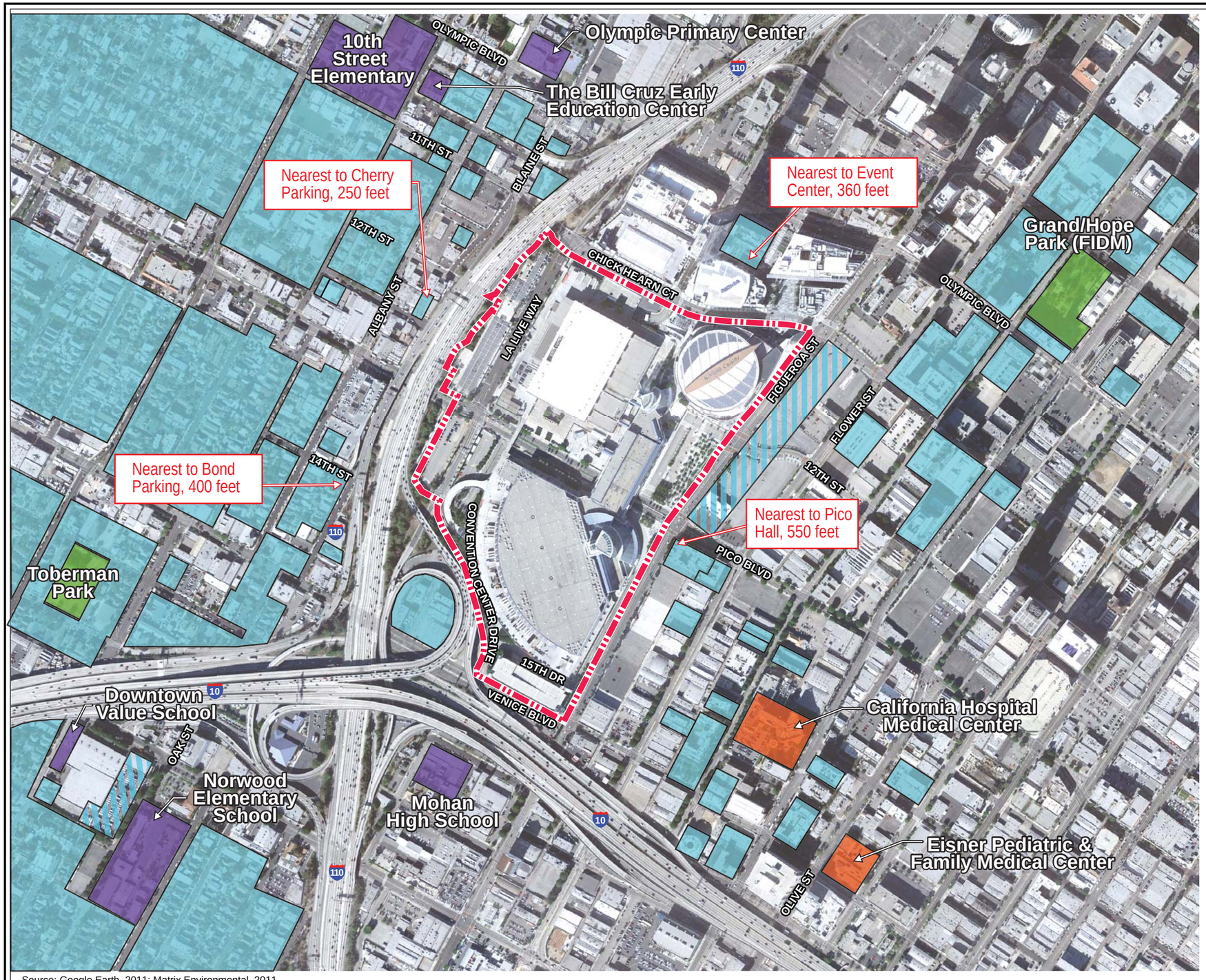
Figure IV.F.1-2
MATES III Total Cancer Risk for Project Area

Source: South Coast AQMD, 2009.



LEGEND

- Project Site Boundary

Locations of Sensitive Receptors

- Existing Residential Use
- Proposed Residential Use
- Schools
- Parks
- Medical Facilities

0’ 500’ 1000’ Feet
Approximate Scale in Feet

Source: Google Earth, 2011; Matrix Environmental, 2011.

matrix environmental

Figure IV.F.1-3
Map of Sensitive Receptors in Area of Potential Impact

(d) Existing Project Site Emissions

The Project Site is located in the downtown area of the City of Los Angeles (City), on an approximately 68-acre site that includes the property owned by the City upon which the Los Angeles Convention Center, the Bond Street Parking Lot, the Cherry Street Garage and STAPLES Center are constructed. As such, existing operations generate air pollutant emissions from a variety of sources. Mobile source emissions are generated by motor vehicle trips to and from the Project Site. Area source emissions are generated by generators, boilers, charbroilers, maintenance equipment, landscape equipment, and use of products that contain solvents. Stationary source emissions at locations remote from the Project Site are generated to provide electricity for the Project Site. An estimate of these emissions is presented in Table IV.F.1-3 on page IV.F.1-16.

For the purpose of addressing potential air quality impacts, operational emissions associated with the Proposed Project are compared against emissions associated with the No Project condition (i.e., existing uses in the Project buildout year) rather than comparing against existing conditions. The comparison to the No Project condition is considered more conservative and limits the potential to underestimate air quality impacts as emission factors for sources associated with the Project Site decrease in subsequent years (i.e., the statewide vehicular fleet mix in future years has a better overall fuel efficiency with decreased emission factors due to more stringent regulations).[5] A complete estimate of pollutant emissions associated with the Project Site under the No Project condition is provided below in Section IV.B.1.b.(4)(b) and is compared to Proposed Project regional operational emissions.

3. Environmental Impacts

a. Significance Thresholds

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:

[5] *A supplemental analysis of the Project's impacts relative to existing (2011) conditions, entitled Analysis in Response to Opinion in Sunnyvale West Neighborhood Association V. City of Sunnyvale City Council, was conducted based on the recent decision in* Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council *(2010) 190 Cal.App.4th 1351 and is provided in Appendix J of this EIR.*

Table IV.F.1-3
Estimated Maximum Daily Regional Operational Criteria Pollutant Emissions—
Existing Project Site Land Uses—2011
(pounds per day)

Emission Source[a]	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Event Day (17,000 attendance)						
On-Site Emissions						
Natural Gas Consumption	0.5	12.1	2.0	<0.1	<0.1	<0.1
Steam Cleaners	<0.1	<0.1	0.6	<0.1	<0.1	<0.1
Propane Forklifts	<0.1	0.4	2.7	<0.1	<0.1	<0.1
Consumer Products	30.5	0.0	0.0	0.0	0.0	0.0
Charbroilers	0.1	2.6	2.3	<0.1	0.9	0.8
Emergency Generators	0.0	0.0	0.0	0.0	0.0	0.0
Cooling Towers	0.0	0.0	0.0	0.0	2.4	<0.1
Spray Booth	0.0	0.0	0.0	0.0	0.0	0.0
Delivery Trucks	1.3	10.3	6.1	<0.1	0.2	0.2
Landscape	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.5	5.2	1.3	0.0	0.2	0.1
Architectural Coatings	0.0	0.0	0.0	0.0	0.0	0.0
Off-Site Emissions						
Electricity	0.5	57.1	9.9	6.0	2.0	2.0
Mobile	19.0	52.1	406.0	0.6	11.9	4.2
On-Site Total	*32.9*	*30.5*	*15.1*	*<0.1*	*3.7*	*1.2*
Off-Site Total	*19.5*	*109.1*	*415.9*	*6.5*	*13.9*	*6.2*
Total Existing Event Day Emissions	***52***	***140***	***431***	***7***	***18***	***7***
Dark Day						
On-Site Emissions						
Natural Gas Consumption	0.2	3.6	0.6	<0.1	<0.1	<0.1
Steam Cleaners	<0.1	<0.1	0.6	<0.1	<0.1	<0.1
Propane Forklifts	<0.1	0.1	0.5	<0.1	<0.1	<0.1
Consumer Products	30.5	0.0	0.0	0.0	0.0	0.0
Charbroilers	0.0	0.0	0.0	0.0	0.0	0.0
Emergency Generators	4.1	40.6	15.2	0.8	3.5	3.5
Cooling Towers	0.0	0.0	0.0	0.0	1.0	<0.1
Spray Booth	4.3	<0.1	<0.1	<0.1	<0.1	<0.1
Delivery Trucks	0.2	1.9	1.1	<0.1	<0.1	<0.1
Landscape	0.1	<0.1	2.8	<0.1	<0.1	<0.1
Miscellaneous	0.5	5.2	1.3	<0.1	0.2	0.1
Architectural Coatings	11.9	0.0	0.0	0.0	0.0	0.0
Off-Site Emissions						
Electricity	0.1	11.4	2.0	1.2	0.4	0.4
Mobile	0.7	2.1	16.2	<0.1	0.5	0.2
On-Site Total	*51.8*	*51.3*	*22.2*	*0.8*	*4.7*	*3.7*
Off-Site Total	*0.8*	*13.5*	*18.2*	*1.2*	*0.9*	*0.6*
Total Existing Dark Day Emissions	***53***	***65***	***40***	***2***	***6***	***4***

Numbers may not add up exactly due to rounding.
[a] *Methodology, calculation worksheets and modeling output files are provided in Appendix M.*
Source: Matrix Environmental, 2012.

- 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 Emissions

In the context of the questions above from Appendix G of the CEQA Guidelines the following factors is set forth in the *City of Los Angeles 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

(i) 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.

(ii) 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.

(c) 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 Handbook,[6] the Proposed 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 $PM_{2.5}$; and (5) 550 pounds per day for CO.

Maximum on-site daily localized emissions exceed the Localized Significance Thresholds (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 [338.4 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 [56.4 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 site to exceed the incremental 24-hr threshold of 10.4 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.

[6] *Website www.aqmd.gov/ceqa/handbook/signthres.doc.*

(2) Operational Emissions

In the context of the questions from Appendix G of the CEQA Guidelines, the *City of Los Angeles 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 $PM_{2.5}$.[7]

- Maximum on-site daily localized emissions exceed the Localized Significance Thresholds (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 parts per million (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).[8]

- Maximum on-site localized operational PM_{10} and $PM_{2.5}$ emissions exceed the incremental 24-hr threshold of 2.5 $\mu g/m^3$ or 1.0 $\mu g/m^3$ PM_{10} averaged over an annual period.[9]

- The project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm at an intersection or roadway.

- The project creates an odor nuisance pursuant to SCAQMD Rule 402 (i.e., objectionable odor at the nearest sensitive receptor).

These thresholds will be applied to the Proposed Project.

(3) Toxic Air Contaminants

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

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[7] *Website www.aqmd.gov/ceqa/handbook/signthres.pdf.*

[8] *South Coast Air Quality Management, LST Methodology, www.aqmd.gov/ceqa/handbook/lst/Method_final.pdf.*

[9] *South Coast Air Quality Management District, Final-Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds, October 2006.*

- The regulatory framework for the toxic material(s) and process(es) involved;
- The proximity of the toxic air contaminants to sensitive receptors;
- The quantity, volume and toxicity of the contaminants expected to be emitted;
- The likelihood and potential level of exposure; and
- The degree to which project design will reduce the risk of exposure.

Based on these factors and criteria set forth in the SCAQMD Handbook, the Proposed Project would have a significant toxic air contaminant impact, if:[10]

- The project emits 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. 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.
- Hazardous materials associated with on-site stationary sources result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety.
- The project would be occupied primarily by sensitive individuals within 0.25 mile of any existing facility that emits air toxic contaminants which could result in a health risk for pollutants identified in District Rule 1401.

(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 *CEQA Air Quality Handbook*,[11] the following criteria 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;

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

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

- 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?
  - Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
  - 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 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.

b. Air Quality Analysis Methodology

This analysis focuses on the potential change in the air quality environment due to implementation of the Proposed Project. Air pollutant emissions associated with the Proposed Project would result from construction and operation of the proposed development. Specific analysis methodologies are discussed below.

(1) Construction Emissions Methodology

The complexity of the Proposed Project (schedule, development areas, overlapping activities) and the availability of Proposed Project specific information (specific list of construction equipment by phase, number of haul truck trips, vendor trips, and worker trips) warranted the development of a modeling protocol that integrated Project specific information with components of standard models where applicable and appropriate. Specifically, calculation procedures provided in SCAQMD's California Emissions Estimator Model (CalEEMod) formed the basis for the protocol and was supplemented where appropriate. As an example, the most recent version of CalEEMod Version 2011.1 uses EMFAC 2007 emission factors for calculating on-road vehicular emissions. EMFAC 2011 was subsequently released and, therefore, the protocol used for modeling of Proposed Project impacts included updated emission factors for on-road vehicular activity using EMFAC 2011. Details of the modeling assumptions and emission factors are provided in Appendix M of this Draft EIR.

In terms of an overview, the calculations of the emissions generated during Proposed Project construction activities reflect the types and quantities of construction equipment that would be used to remove existing structures and pavement; grade and excavate the Project Site; construct the proposed buildings, structures and related improvements; and plant new landscaping within the Project Site. Construction tasks were aggregated to reflect overlapping tasks and identify the maximum construction emissions occurring over the course of project construction.

Construction of the Proposed Project is expected to commence in 2012 and end in 2016. To estimate peak daily construction emissions, emissions were first calculated for the individual construction activities (e.g., demolition, site preparation and excavation, building foundation, and building construction) for each of the four primary components (Bond Street Garage, the New Hall, L.A. Live Way Garage, and Event Center). Peak daily emissions were then determined by summing emissions from overlapping construction activities as indicated in the proposed construction schedule found in Appendix M. The combination of overlapping construction activities between the primary components producing the highest daily emissions was selected as the peak day. These emission estimates are conservative in nature, meant to convey a worst-case scenario, and are, therefore, not necessarily representative of actual daily emissions. As an example, potential overlap between mass excavation of the Event Center and concrete/steel/precast framing at the New Hall was considered in the analysis. The peak daily emissions from each of these construction activities were assumed to occur on the same day. However, on a day that concrete is not poured at the New Hall, the emissions for this construction activity would be reduced and the combined emissions would be reduced.

The localized effects from the on-site portion of daily emissions were evaluated at sensitive receptor locations potentially impacted by the Proposed Project according to the SCAQMD's localized significance threshold (LST) methodology, which utilizes on-site mass emissions rate look up tables and project specific modeling, where appropriate. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. 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 (SRA) and distance to the nearest sensitive receptor. For PM_{10} and $PM_{2.5}$, LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust. The mass rate look-up tables were developed for each SRA 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 that are less than or

equal to 5 acres. For projects that exceed 5 acres, the 5-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis.[12] 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.

Where construction emissions exceeded the screening-level look-up table values, the localized effects from the on-site construction emissions were evaluated to determine potential pollutant concentrations at sensitive receptors. The analysis was conducted using the EPA's preferred regulatory Gaussian Plume Air Dispersion Model (AERMOD), a methodology that is also consistent with SCAQMD's *Localized Significance Threshold Methodology for CEQA Evaluations* guidance document. A complete listing of the construction equipment by primary component, construction activity, duration, emissions estimation model and dispersion model input assumptions used in this analysis are included in the emissions calculation worksheets provided as Appendix M of this Draft EIR.

(2) Operational Emissions Methodology

(a) Regional

Similar to construction, the unique operational attributes of the Proposed Project (types of sources, operating schedule, trip generation rates, and trip distances) warranted the development of a modeling protocol that integrates Proposed Project specific information and components of standard models where applicable and appropriate. Specifically, the calculation procedures provided in the SCAQMD's CalEEMod formed the basis for the protocol and was supplemented where appropriate (e.g., EMFAC 2011 for on-road emission factors). In addition, sources such as charbroilers, idling delivery trucks, emergency generators, and cooling towers are not included in CalEEMod and, therefore, were calculated using other applicable calculation procedures (e.g., SCAQMD's CEQA Handbook and USEPA's Compilation of Air Pollutant Emission Factors (AP-42).[13] Details of modeling assumptions and emission factors are provided in Appendix M of this Draft EIR.

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

[13] *Refer to page 9 of Appendix M.1.*

Analysis of the Proposed Project's likely impact on regional air quality during long-term project operations (i.e., after construction is complete) considers three types of sources: (1) mobile; (2) area; and (3) stationary. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site and associated with operation of the Project. Area source emissions are generated by, among other things, boilers, maintenance equipment (e.g., steam cleaners), generators, paint booths, charbroilers, cooling towers, and the use of consumer products The stationary sources considered in the analysis of regional impacts are those involved with generating electricity for the project.[14]

Future facility operational emissions were calculated based on the assumption that existing usage of emissions sources would increase/decrease proportionally with the change in square footage and attendance by land use type as a result of the Proposed Project. Future emissions estimates also use emissions factors that take into account emissions reductions due to improvements in technology.

To determine if a significant air quality impact would occur, the net increase in regional operational emissions generated by the Proposed Project were compared against the SCAQMD's significance thresholds.[15]

(b) Localized

The general procedure for evaluating localized impacts from Project operations is to evaluate any new or modified stationary combustion sources, and to study the likely effect on CO concentrations of induced traffic at nearby intersections.

Effects related to operation of stationary-source combustion equipment at the Proposed Project, and associated pollutant emissions, were evaluated by conducting a screening-level analysis followed by a more detailed analysis (i.e., dispersion modeling) as necessary. The screening-level analysis consists first of reviewing the Proposed Project's site plan and related project description to identify any new or modified stationary-source combustion equipment. Then, if such equipment is identified, the potential significance of its impact is evaluated qualitatively in light of applicable regulations and operating

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[14] *A review of the Proposed Project's site plan and related project description did not identify any new or modified individually significant stationary source on-site.*

[15] *SCAQMD Air Quality Significance Thresholds (Rev. March 2009), www.aqmd.gov/ceqa/handbook/signthres.pdf. 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.)*

parameters and a comparison to SCAQMD LSTs. If the screening level evaluation does not rule out significant impacts, a more detailed analysis is conducted. Downwind sensitive receptor locations are identified, and site-specific dispersion modeling is conducted to estimate project impacts. The detailed analysis is conducted using EPA's preferred regulatory dispersion model (AERMOD).

Localized CO concentrations were evaluated using a screening method based on the California Line Source (CALINE4) microscale dispersion model, developed by Caltrans, in combination with EMFAC2011 emission factors. The screening method enables the user to manually calculate local CO concentrations resulting from motor vehicles. If the screening method does not rule out significant impacts for an intersection, then detailed analysis using CALINE4 is conducted. In traffic studies, the term "level of service" (LOS) describes traffic performance at intersections or along roadway segments, and is generally expressed as a letter grade (A through F, with an F grade meaning the worst-flowing traffic). Traffic researchers and planning agencies generally assign LOS ratings to intersections based on the ratio of traffic volume (or demand) to capacity (V/C). Lower V/C ratios correspond to better performance (freer-flowing traffic). SCAQMD recommends conducting a CO hotspots analysis according to a Caltrans protocol for any intersection where a Proposed Project would worsen the LOS by a level to any level below C, and for any intersection rated D or worse where the Proposed Project would increase the V/C ratio by 2 percent or more. Projected CO concentrations were compared to ambient air quality standards and incremental increase thresholds to determine whether CO impacts from operation would be significant.

As with the localized CO hotspots analysis for intersections, a similar analysis was conducted for the two proposed parking structures, Bond Street Garage and L.A. Live Way Garage. The analysis conducted uses EPA's preferred regulatory dispersion model (AERMOD). Vehicle emission inputs for the AERMOD model were calculated based on the number of vehicles, distance traveled, and idle time using emission factors from EMFAC2011. The number of vehicles was assumed to equal the number of parking spaces in order to account for full structures. Distance traveled was equal to two times the length of the respective parking structure for each level of the structure. Idle time was assumed to be 5 minutes per car per level and 15 minutes upon exit.

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

Potential TAC impacts were evaluated by conducting a screening-level analysis followed by a more detailed analysis (i.e., dispersion modeling), as necessary. The screening-level analysis consisted of reviewing the Proposed Project's site plan and project description to identify any new or modified TAC emissions sources and consideration of CARB siting guidelines. Where the qualitative evaluation did not rule out significant

impacts from a new source, or modification of an existing TAC emissions source, a more detailed analysis was conducted. Downwind sensitive receptor locations were identified, and site-specific dispersion modeling was conducted to estimate Proposed Project impacts. A detailed assessment of TAC emissions was conducted based on the overall length of proposed construction activities.

(4) Odor Impacts (Construction and Operations)

Potential odor impacts were evaluated by conducting a screening-level analysis followed by a more detailed analysis (i.e., dispersion modeling) as necessary. The screening-level analysis consisted of reviewing the Proposed Project's site plan and project description to identify new or modified odor sources. The qualitative evaluation performed did not identify any new significant impacts from a new source, nor did a modification of an existing odor source create additional potential significant impacts. This is further discussed in Section IV.F.1(d)(4).

c. Project Design Features

The air quality analysis includes the following project design features that factor into the estimates of construction and operational emissions levels presented in the following sections. The sustainability project features would be implemented by incorporation of the features into the conditions of approval for the Proposed Project, mitigation measures, or pursuant to the regulations or design criteria required by the City of Los Angeles Green Building Code. Some of the key sustainability project features are highlighted below. A comprehensive matrix listing these and other sustainable design features that would be implemented by the project is contained in Section II, Project Description, of this Draft EIR.

The Proposed Project would incorporate sustainability as one of the key design and operation criteria. In so doing the Proposed Project would meet all aspects of the City of Los Angeles Green Building Code. The Event Center would be designed to achieve LEED certification. The New Hall would be designed with the intent of achieving a LEED Gold certification. Further detail on the sustainability measures for the three primary components of the Proposed Project is provided below:

(1) The New Hall

The LEED rating system is broken down into five (5) main categories of environmental sustainability. These categories are Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, and Indoor Environmental Quality. Summary descriptions of how these sustainability measures would be incorporated into the New Hall are described below.

(a) Sustainable Sites

The Project Site is located on a previously developed urban site in Downtown Los Angeles with substantial existing infrastructure in place. This site location provides convenient pedestrian access to the Metro Rail Blue Line Pico Station and the Metro Rail Red Line 7th/Metro Center Station. The site is also well served by bus service as described in Section IV.B.1 Transportation of this Draft EIR. The Urban Heat Island, on both roof and non-roof surfaces, would be reduced by the use of compliant materials with a high solar reflectance index (SRI).

(b) Water Efficiency

- Water use reduction by 33 percent in comparison to estimated baseline.[16]

Low flow toilets and waterless or low flow urinal fixtures would be used throughout the Project Site. Drought tolerant plants and efficient irrigation systems would be used throughout the development.

(c) Energy and Atmosphere

The New Hall would comply with the required measures of the 2010 Los Angeles Green Building Code and implement additional efficiency measures to achieve greater than 20 percent reduction in energy consumption relative to the estimated baseline.[17] Demand control ventilation would be utilized in HVAC systems, and refrigerants with low GHG emission rates would be used in heating, ventilation and air conditioning equipment.

(d) Materials and Resources

- A minimum of 20 percent of all building materials and products for development will consist of recycled content or be manufactured regionally, while a minimum of 5 percent of all building materials and products for development would be rapidly renewable; and

- A combined minimum of 75 percent of construction waste and/or debris would be diverted from landfill storage for both the demolition and new construction phases.

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[16] *Water Baseline calculated according to the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code as cited in 2010 Los Angeles Green Building Code.*

[17] *The Event Center and the New Hall have both registered for LEED v.3 (LEED NC 2009) and will calculate energy baselines with ASHRAE 2007.*

The design, materials, and resources selection for the New Hall would be made to minimize environmental impacts. The construction of the New Hall would include a Construction Waste Management (CWM) plan to achieve the waste diversion percentages noted above. The New Hall construction would also require a minimum of 20 percent recycled content, thereby reducing impacts from the extraction and processing of virgin materials. To support local industry and reduce environmental impacts associated with the transport of materials, a minimum of 20 percent of the overall construction materials would be extracted, processed, or manufactured within a 500-mile radius of the Project Site.

(e) Indoor Environmental Quality

The New Hall would be designed, constructed, and operated to optimize indoor air quality and minimize indoor air contaminants. An indoor air quality management plan would be prepared prior to construction. The design for the New Hall would specify interior finish materials such as adhesives, sealants, paints, flooring and composite wood products with low emission rates of volatile organic compounds (VOCs) and to reduce the generation of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well being of the construction work force and building occupants. The HVAC system would be designed to optimize exterior and interior air flow to ensure healthy indoor air quality. Prior to occupancy, the ventilation system shall be operated to reduce VOC's from the interior of the buildings generated during construction and installation of building materials. Potential adverse effects from this operation would be addressed by the indoor air quality management plan. Such measures may include, but not be limited to, conducting this process during favorable meteorological conditions for pollutant dispersion and would be discontinued during second-stage smog alerts.

(2) The Event Center

As part of an effort to pursue LEED certification, Event Center operations would incorporate the AEG 1EARTH environmental program already implemented at STAPLES Center and across L.A. LIVE to help achieve the following goals:

(a) Energy and Climate

- Energy performance improved by greater than 14 percent of the estimated baseline.[18]

[18] *The Event Center and the New Hall have both registered for LEED v.3 (LEED NC 2009) and will calculate energy baselines with ASHRAE 2007.*

The Event Center would optimize energy performance through the installation of best available technology for HVAC, lighting, and all major electrical appliances and control systems; and through educating employees on energy efficiency through an Environmental Management System.

(b) Recycling and Waste Diversion

- 50 percent solid waste diverted during construction; and
- 50 percent solid waste diverted during operation.

The Event Center would divert waste from landfill through robust recycling, the donation of durable goods, and implementing a front of house composting program that includes sourcing biodegradable concessions packaging.

(c) Water Conservation

- 35 percent reduction in water use in comparison to estimated baseline.[19]

Water conservation measures at the Event Center would include the use of artificial turf for the field surface. The Event Center would conserve water by installing the best available technology for water fixtures and equipment and educating our employees on water efficiency through an Environmental Management System.

(d) Sustainable Purchasing

- 10 percent of all building materials will be rapidly renewable, recycled content or manufactured regionally; and
- 90 percent of on-going consumable paper and janitorial and lighting products will be purchased in conformance with AEGs Environmentally Preferable Procurement Policy, which establishes priorities for the purchase of products based on health and environmental considerations.

The Event Center would implement AEG's Environmentally Preferable Procurement Policy to ensure that the health and environmental impacts of products are taken into consideration and weighed appropriately against cost. Emphasis would be placed on

[19] *Water Baseline calculated according to the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code as cited in 2010 Los Angeles Green Building Code.*

HVAC, lighting, janitorial, and paper products, as well as sourcing local and recycled-content materials.

(e) Education

- Environmental messaging to fans during events and to employees; and
- Host to environmental outreach events.

The Event Center would host public and industry environmental events that promote dialogue and collaboration on innovative environmental solutions. In addition, the Event Center would feature educational environmental signage and messaging via the event scoreboard.

(3) Parking Garages

The two larger, more efficient parking garages that would be constructed west of L.A. Live Way to replace the existing Bond Street Parking Lot and the existing Cherry Street Garage, as well as the parking that is currently located beneath the existing West Hall, will feature energy efficient lighting. The Event Center Applicant shall provide up to 12 electric vehicle charging stations in addition to Code requirements (i.e., provide electric vehicle supply wiring equal to 5 percent of the total number of parking spaces) and 250 bicycle spaces in one or more of the on-site parking garages to facilitate and encourage the use of electric vehicles and provide priority parking locations for hybrid and electric vehicles, to facilitate and encourage the use of these vehicles..

(4) SB 292

As part of SB 292, the Event Center must achieve and maintain carbon neutrality by reducing to zero the net emissions of greenhouse gases from private automobile trips to and from Spectator Events at the Event Center. This objective would be realized via the following program:

1. Implementation of the Event Center's Transportation Management Plan;
2. Investment in local community projects that reduce greenhouse gas emissions; and
3. Purchase of carbon offsets. When feasible, offset purchases would be prioritized by proximity to the Project Site, with greatest preference given to projects within the jurisdictional boundaries of the South Coast Air Quality Management District, then California, and then finally nationally.

In addition, the Proposed Project must achieve and maintain a vehicle trip ratio (defined as the total annual number of private automobiles arriving at the Event Center for Spectator Events divided by the total number of spectators at the events) that is no more than 90 percent of the trip ratio at any other stadium serving a team in the National Football League. This would reduce traffic congestion, further improve air quality, and reduce greenhouse gas emissions.

(5) Construction

- The Project would comply with SCAQMD Rule 403 regarding fugitive dust control through implementation of 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.
  - 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 would be covered or would maintain at least 6 inches of freeboard.
  - Suspend earthmoving operations or implement additional watering to meet Rule 403 criteria if wind gusts exceed 25 mph.
  - An information sign shall be posted at the entrance to each 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.

d. Analysis of Project Impacts

(1) Construction

(a) Regional Construction Impacts

Construction activities would include demolition of existing uses, grading and excavation, and construction of new structures and related infrastructure. It is anticipated that the Proposed Project would result in the excavation and export of approximately 867,000 cubic yards of soil.

Construction of the Proposed Project has the potential to create air quality impacts through the use of heavy-duty construction equipment and by 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, paving operations and the application of architectural coatings (i.e., paints) and other building materials would release VOCs. 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. The assessment of construction air quality impacts considers each of these potential sources.

In order to provide a conservative analysis, it was assumed that all construction activities would be completed within the minimum timeframe anticipated for construction which provides for the maximum overlap of construction components within the Project's overall development period. This is of particular importance as construction emissions are directly related to the duration and intensity of construction activities (i.e., emissions increase as the amount of construction and intensity increases). Emission rates representative of certain stages of construction (i.e., construction worker trips and delivery vehicle trips) can also decrease over time in response to the use of cleaner vehicles or equipment that emit lower levels of pollutants. Construction phasing assumptions are presented in Table IV.F.1-4 on page IV.F.1-33. Additional details of construction activities (i.e., demolition, site preparation/excavation, and building construction/finishing) and the equipment that would be used during Project construction are provided in Appendix M of this Draft EIR.

The emissions levels in Table IV.F.1-5 on page IV.F.1-34 represent the highest daily emissions projected to occur on any one day for each individual geographic construction component of the Proposed Project.

As presented in Table IV.F.1-5, construction-related daily maximum regional construction emissions would not exceed the SCAQMD daily significance thresholds for SO_X, PM_{10}, and $PM_{2.5}$. However, maximum regional emissions would exceed the SCAQMD daily significance thresholds for VOC during periods of architectural coatings application and CO and NO_X during periods of heavy construction equipment use. Therefore, regional construction emissions resulting from the Proposed Project would result in a significant short-term impact before mitigation.

Table IV.F.1-4
Construction Phasing Assumptions

Phase	Active Acres per Day	Total Soil/ Debris Exported (CY)	Maximum Number of Heavy-Duty Construction Equipment per Day	Maximum Truck Round Trips per Day
Bond Street Garage (Sep. 2012–Jul. 2013)				
Demolition		256	6	11
Mass Excavation	1	5,382	9	4
Foundations			14	13
Concrete/Steel/Precast Frame			12	25
Site Work/Landscaping			7	6
Interior/Exterior			5	2
New Hall (Sep. 2012–Feb. 2014)				
Demolition		6,000	18	12
Mass Excavation	1.7	15,733	10	37
Caisson Phase			14	23
Concrete/Steel/Precast Frame			17	37
Site Work/Landscaping			10	10
Interior/Exterior			39	24
L.A. Live Way Garage (Jul. 2013–Sep. 2014)				
Demolition		37,822	18	27
Mass Excavation	2.7	38,706	13	160
Foundations			14	13
Concrete/Steel/Precast Frame			19	33
Site Work/Landscaping			9	8
Interior/Exterior			9	4
Event Center (Dec. 2013–Aug. 2016)				
Demolition		57,000	17	84
Mass Excavation	5	807,200	16	256
Caisson Phase			16	37
Shoring Phase			14	15
Concrete/Steel/Precast Frame			20	60
Site Work/Landscaping			14	6
Interior/Exterior			43	12
Playing Field			13	14

Additional details of construction activities and the equipment that would be used during Project construction are provided in Appendix M of this Draft EIR.

Source: ICON Venue Group, 2012.

Table IV.F.1-5
Unmitigated Proposed Project—Estimate of Maximum Daily Construction Emissions[a]
(pounds per day)

Regional Emissions	VOC	CO	NO_X	SO_X	PM_{10}[b]	$PM_{2.5}$[b]
Bond Street Garage (Sep. 2012–Jun. 2013)						
Demolition	6	23	42	<1	3	2
Mass Excavation	6	27	38	<1	11	4
Foundations	10	54	53	<1	5	3
Concrete/Steel/Precast Frame	8	50	56	<1	5	3
Site Work/Landscaping	5	25	29	<1	3	2
Interior/Exterior	20	26	18	<1	2	1
Maximum Bond Street Daily Emissions[c]	*28*	*76*	*80*	<1	*14*	*6*
New Hall (Sep. 2012–Feb. 2013)						
Demolition	16	60	122	<1	8	5
Mass Excavation	9	41	76	<1	21	7
Caisson Phase	11	57	81	<1	6	4
Concrete/Steel/Precast Frame	13	80	80	<1	8	5
Site Work/Landscaping	9	50	54	<1	4	3
Interior/Exterior	74	290	172	<1	18	13
Maximum New Hall Daily Emissions[d]	*98*	*427*	*333*	*1*	*31*	*22*
L.A. Live Way Garage (Jul. 2013–Sep. 2014)						
Demolition	15	59	120	<1	12	6
Mass Excavation	16	69	156	<1	39	12
Foundations	9	54	50	<1	4	3
Concrete/Steel/Precast Frame	13	68	82	<1	7	4
Site Work/Landscaping	6	33	38	<1	3	2
Interior/Exterior	47	41	37	<1	3	3
Maximum L.A. Live Way Garage Daily Emissions[e]	*60*	*129*	*275*	<1	*51*	*18*
Event Center (Dec. 2013–Aug. 2016)						
Demolition	17	69	145	<1	17	7
Mass Excavation	23	103	236	<1	67	19
Caisson Phase	10	47	78	<1	6	4
Shoring Phase	8	38	58	<1	4	3
Concrete/Steel/Precast Frame	27	337	120	1	16	8
Site Work/Landscaping	7	44	44	<1	3	2
Interior/Exterior	50	459	177	<1	22	13
Playing Field	9	50	57	<1	4	3
Maximum Event Center Daily Emissions[f]	*94*	*881*	*493*	*1*	*92*	*33*

Table IV.F.1-5 (Continued)
Unmitigated Proposed Project—Estimate of Construction Emissions[a]
(pounds per day)

Regional Emissions	VOC	CO	NO_X	SO_X	PM_{10}[b]	$PM_{2.5}$[b]
Maximum Overlapping Construction Emissions[g]	***127***	***881***	***612***	***1***	***102***	***40***
SCAQMD Daily Significance Thresholds	**75**	**550**	**100**	**150**	**150**	**55**
Over/(Under)	**52**	**331**	**512**	**(149)**	**(48)**	**(15)**
Exceed Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the calculation worksheets that are presented in Appendix M.*

[b] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

[c] *Maximum overlapping VOC and CO emissions occur when Concrete/Steel/Precast Frame and Interior/Exterior phases overlap. All other pollutant maximum overlapping emissions occur when Demolition and Mass Excavation phases overlap.*

[d] *Maximum overlapping emissions occur when Caisson, Concrete/Steel/Precast Frame and Interior/Exterior phases all overlap.*

[e] *Maximum overlapping VOC emissions occur when Concrete/Steel/Precast Frame and Interior/Exterior phases overlap. All other pollutant maximum overlapping emissions occur when Demolition and Mass Excavation phases overlap.*

[f] *Maximum overlapping NO_X, PM_{10}, and $PM_{2.5}$ emissions occur when Mass Excavation, Caisson, Shoring, and Concrete/Steel/Precast Frame phases all overlap. All other pollutant maximum overlapping emissions occur when Caisson, Shoring, Concrete/Steel/Precast Frame, and Interior/Exterior phases all overlap.*

[g] *Maximum overlapping CO emissions occur when Event Center Caisson, Shoring, Concrete/Steel/Precast Frame, and Interior/Exterior phases overlap. All other pollutant maximum overlapping emissions occur when L.A. Way Garage Concrete/Steel/Precast Frame, L.A. Way Garage Interior/Exterior, and Event Center Mass Excavation, Caisson, Shoring, and Concrete/Steel/Precast Frame phases overlap.*

Source: Matrix Environmental, 2012.

(b) Localized Impacts from On-Site Construction Activities

The conservative estimate of maximum on-site daily emissions for NO_X, PM_{10}, $PM_{2.5}$, and CO was compiled for construction of the Proposed Project and compared to the applicable screening threshold based on construction site acreage and distance to closest sensitive receptor. The localized construction air quality analysis was conducted using the methodology promulgated by the SCAQMD. Look-up tables provided in the LST document were used to determine localized construction emissions thresholds for the Proposed Project. The unmitigated maximum daily localized emissions and localized significance thresholds are presented in Table IV.F.1-6 on page IV.F.1-36.

Table IV.F.1-6
Unmitigated Proposed Project—Estimate of Maximum Daily Localized Construction Emissions (pounds per day)

Local Emissions	NO_X	CO	PM_{10}[a]	$PM_{2.5}$[a]
Bond Street Garage				
Demolition	36	17	2	2
Mass Excavation	35	17	11	4
Foundations	43	29	3	3
Concrete/Steel/Precast Frame	39	23	2	3
Site Work/Landscaping	25	19	2	2
Interior/Exterior	16	13	1	1
Bond Street Maximum On-Site Emissions[b]	**70**	**36**	**13**	**5**
SCAQMD Localized Significance Thresholds[c]	**37**	**1,806**	**41**	**18**
Exceed Threshold?	**Yes**	**No**	**No**	**No**
New Hall				
Demolition	114	50	7	5
Mass Excavation	53	28	18	6
Caisson Phase	66	32	3	3
Concrete/Steel/Precast Frame	56	37	4	4
Site Work/Landscaping	47	31	3	3
Interior/Exterior	142	102	12	10
New Hall Maximum On-Site Emissions[d]	**265**	**172**	**25**	**17**
SCAQMD Localized Significance Thresholds[e]	**51**	**3,061**	**67**	**31**
Exceed Threshold?	**Yes**	**No**	**No**	**No**
L.A. Live Way Garage				
Demolition	104	47	10	5
Mass Excavation	66	35	27	8
Foundations	41	28	3	3
Concrete/Steel/Precast Frame	62	38	4	3
Site Work/Landscaping	33	24	2	2
Interior/Exterior	34	24	3	2
L.A. Live Way Garage Maximum On-Site Emissions[f]	**170**	**83**	**37**	**13**
SCAQMD Localized Significance Thresholds[g]	**51**	**1,901**	**39**	**11**
Exceed Threshold?	**Yes**	**No**	**No**	**Yes**
Event Center				
Demolition	97	46	10	5
Mass Excavation	108	51	49	13
Caisson Phase	59	33	3	3
Shoring Phase	50	28	3	2
Concrete/Steel/Precast Frame	65	43	4	4
Site Work/Landscaping	41	33	3	2

Table IV.F.1-6 (Continued)
Unmitigated Proposed Project—Estimate of Localized Construction Emissions
(pounds per day)

Local Emissions	NO_X	CO	PM_{10}[a]	$PM_{2.5}$[a]
Interior/Exterior	141	113	11	9
Playing Field	51	41	3	3
Event Center Maximum On-Site Emissions[h]	**315**	**216**	**60**	**22**
SCAQMD Localized Significance Thresholds[i]	**68**	**3,281**	**66**	**23**
Exceed Threshold?	**Yes**	**No**	**No**	**No**
Proposed Project Maximum Overlapping Localized Emissions[j]	**389**	**246**	**65**	**28**
SCAQMD Localized Significance Thresholds[k]	**66**	**2,651**	**53**	**15**
Exceed Threshold?	**Yes**	**No**	**Yes**	**Yes**

[a] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

[b] *Maximum on-site emissions for CO occur when Concrete/Steel/Precast Frame and Interior/Exterior phases overlap. Maximums for all other pollutants occur when Demolition and Mass Excavation overlap.*

[c] *SCAQMD LSTs based on SRA 1, 1 acre active site area, and 122 meter (400 feet) receptor distance.*

[d] *Maximum on-site emissions for CO, NO_X, and $PM_{2.5}$ occur when Caisson, Concrete/Steel/Precast Frame and Interior/Exterior phases overlap. Maximum PM_{10} emissions occur when Demolition and Mass Excavation overlap.*

[e] *SCAQMD LSTs based on SRA1, 2 acre active site area, and 168 meter (550 feet) receptor distance.*

[f] *Maximum on-site emissions for all pollutants occur when Demolition and Mass Grading overlap.*

[g] *SCAQMD LSTs based on SRA 1, 3 acre active site area, and 76 meter (250 feet) receptor distance.*

[h] *Maximum on-site emissions of CO and NO_X occur when Caisson, Shoring, Concrete/Steel/Precast Frame, and Interior/Exterior phases overlap. Maximum on-site emissions of PM_{10} occur when Demolition and Mass Excavation phases overlap. Maximum on-site emissions of $PM_{2.5}$ occur when Mass Excavation, Caisson, Shoring, and Concrete/Steel/Precast Frame phases all overlap.*

[l] *SCAQMD LSTs based on SRA 1, 5 acre active site area, and 110 meter (360 feet) receptor distance.*

[j] *Maximum on-site emissions between overlapping sites occur for CO, and NO_X when New Hall Site Work/Landscaping, New Hall Interior/Exterior, L.A. Live Way Garage Foundations, L.A. Live Way Garage Concrete/Steel/Precast Frame, and Event Center Demolition overlap. Maximum emissions for PM_{10} and $PM_{2.5}$ occur when L.A. Live Way Garage Concrete/Steel/Precast Frame, L.A. Live Way Garage Interior/Exterior, Event Center Mass Excavation, Event Center Caisson, Event Center Shoring, and Event Center Concrete/Steel/Precast Frame phases all overlap.*

[k] *SCAQMD LSTs based on SRA 1, 5 acre active site area, and 76 meter (250 feet) receptor distance.*

Source: Matrix Environmental, 2012.

The SCAQMD's LSTs for the Project area are based on the acreage of activity and distance to receptor and vary depending on the construction scenario analyzed. Therefore, localized impacts were evaluated using the individual project components, maximum on-site emissions, and maximum combined overlapping activities for combined project

components. Maximum overlapping CO and NO_X emissions occur during New Hall Site Work/Landscaping, New Hall Interior/Exterior, L.A. Live Way Garage Foundations, L.A. Live Way Garage Concrete/Steel/Precast Frame, and Event Center Demolition phases overlap. Maximum overlapping PM_{10} and $PM_{2.5}$ emissions occur during L.A. Live Way Garage Concrete/Steel/Precast Frame, L.A. Live Way Interior/Exterior, Event Center Mass Excavation, Caisson, Shoring, and Concrete/Steel/Precast Frame phases overlap. As shown therein, maximum localized construction $PM_{2.5}$ emissions occur during L.A. Live Way Garage Concrete/Steel/Precast Frame, L.A. Live Way Garage Interior/Exterior, Event Center Mass Excavation, Caisson, Shoring, and Concrete/Steel/Precast Frame phases overlap.

As shown therein, maximum localized construction emissions for off-site sensitive receptors would not exceed the localized screening threshold for CO for the maximum individual project components or maximum on-site emissions. However, localized NO_X, PM_{10}, and $PM_{2.5}$ emissions would exceed the applicable screening-level LST. Maximum localized construction emissions for off-site sensitive receptors would not exceed the localized screening threshold for CO for the maximum overlapping daily construction activities for combined project components. However, localized PM_{10}, $PM_{2.5}$, and NO_X emissions would exceed the applicable screening-level LST.[20] The SCAQMD localized threshold for NO_X was revised to account for the recently adopted 1-hour NO_2 NAAQS of 188 $\mu g/m^3$ or an incremental threshold of 46 $\mu g/m^3$ for SRA 1. This is equivalent to 66 pounds per day for a 5-acre site at a distance of 76 meters (250 feet) within SRA 1 and is substantially less than 162 pounds per day for the state standard. The Project would not exceed the SCAQMD LST for the state standard. Therefore, localized construction emissions resulting from the Proposed Project would result in a significant short-term impact before mitigation.

(c) Toxic Air Contaminants

The greatest potential for TAC emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. According to the SCAQMD's 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. OEHHA has

[20] *Please note that maximum overlapping emissions decrease in comparison to maximum on-site emissions. However, the distance to sensitive receptor decreases under the maximum overlapping project component scenario. Thus, the LSTs decrease for the maximum overlapping scenario and PM_{10} and $PM_{2.5}$ emissions under this scenario exceed the LSTs.*

developed methodology for estimating health risk from TAC pollutants such as diesel exhaust from construction equipment. OEHHA has developed a DPM inhalation non-cancer (long-term) reference exposure level (REL) of 5 micrograms per cubic meter ($\mu g/m^3$). No non-cancer acute (short-term) REL has been established for DPM.

Although the SCAQMD CEQA guidance document does not recommend a health risk assessment for short-term construction emissions, an assessment of diesel particulate emissions was conducted to assess this potential risk using the same assumptions used for the localized analysis discussed above. As such, this analysis includes all diesel exhaust emissions associated with on-site heavy equipment and haul trucks during the construction period. The results of this analysis for the construction of the Proposed Project yield a maximum incremental increase in off-site individual adult cancer risk of 3.1 in a million over the duration of construction and an excess cancer burden of less than 0.1, where the maximum impact occurs at residential uses north of the Project Site. The cancer risk increases at this receptor to 5.2 in a million for the maximum incremental increase in off-site individual child cancer risk. The excess cancer burden was also less than 0.1. The chronic hazard index is approximately 0.06 and 0.05 for adult and child exposure, respectively, and is less than the SCAQMD significance threshold of 1.0.[21] As the Proposed Project would not emit carcinogenic or toxic air contaminants that individually or collectively exceed the maximum individual cancer risk of 10 in one million or result in an excess cancer burden of 0.5 or more, Project-related toxic emission impacts from construction activities will be less than significant and no mitigation would be required. Neither the City nor the SCAQMD has established a criterion to assess the significance of cumulative health risks, such as those resulting from the exposure to Project-related emissions combined with existing or contemplated future pollutant concentrations (background). The applicable criteria apply only to the incremental increase in risk.

(d) Odors

During the Project's construction phase, activities associated with the operation of construction equipment, the application of asphalt, the application of architectural coatings and other interior and exterior finishes, and roofing may produce discernible odors typical of most construction sites. SCAQMD Rule 1113 limits the amount of volatile organic compounds from architectural coatings and solvents to further reduce the potential for odiferous emissions. Although these odors could be a source of nuisance to adjacent uses, they are temporary and intermittent in nature. In addition, as construction-related emissions dissipate away from the construction area, the odors associated with these

[21] *Please note that diesel particulate matter does not have an acute exposure endpoint and, therefore, the SCAQMD acute index threshold of 1.0 is not applicable.*

emissions would also decrease and would be quickly diluted. Therefore, impacts associated with objectionable odors during Project construction would be less than significant

(2) Operational Impacts

(a) Regional Operational Impacts

Regional air pollutant emissions associated with Proposed Project operations would be generated by future facility operations (e.g., boilers, maintenance equipment, generators, paint booths, charbroilers, cooling towers, and the use of consumer products), consumption of electricity and natural gas, and by the operation of on-road vehicles. Pollutant emissions associated with energy demand (i.e., electricity generation) are classified by the SCAQMD as regional stationary source emissions. Electricity is considered an area source since it is produced at various locations within, as well as outside of, the Basin. Since it is not possible to isolate where electricity is produced, these emissions are conservatively considered to occur within the Air Basin and are regional in nature. Mobile source emissions were calculated using trip generation rates provided by the traffic consultant for the Proposed Project, The Mobility Group,[22] and were analyzed for various scenarios (i.e., weekday, weekend, LACC dark) for each facility. It should be noted that only emissions from patrons to large events at the Event Center are subject to SB292.

As shown in Table IV.F.1-7 on page IV.F.1-41, regional emissions resulting from operation of the Proposed Project are expected to exceed the SCAQMD thresholds for NO_X, VOC, CO, PM_{10}, and $PM_{2.5}$.[23] Air quality impacts from Project operational emissions would be significant and mitigation measures would be required.

As shown in Table IV.F.1-7, mobile source emissions represent a substantial portion of project-related emissions on an Event Day (64 percent VOC, 74 percent NO_X, 97 percent CO, 53 percent SO_X, 95 percent PM_{10}, and 90 percent $PM_{2.5}$). These emissions are anticipated for an event with an attendance level of 72,000 at the Event Center combined with an attendance level of 19,550 at the Los Angeles Convention Center. Such

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[22] *The Mobility Group, Convention Center Modernization and Farmers Field Project—EIR Transportation Study, November 2011.*

[23] *The Proposed Project would include the use of artificial turf for the field in which small amounts of VOC could be released from crumb rubber infill under sunny, hot weather conditions. According to a study conducted by the California Office of Environmental Health Hazard Assessment (OEHHA), adverse health effects were unlikely to occur in persons using artificial turf. Available at www.fieldturf.com/artificial-turf-news/california-oehha-concludes-turf-is-safe/.*

Table IV.F.1-7
Unmitigated Maximum Daily Regional Operational Emissions—Buildout in Year 2017
(pounds per day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Proposed Project Emissions—Event Day						
On-Site Emissions						
Natural Gas Consumption	2.0	46.1	7.7	<0.1	0.1	0.1
Steam Cleaners	0.1	<0.1	1.6	<0.1	<0.1	<0.1
Propane Forklifts	<0.1	0.6	4.6	<0.1	<0.1	<0.1
Consumer Products	65.9	0.0	0.0	0.0	0.0	0.0
Charbroilers	0.4	11.6	10.5	<0.1	4.3	3.6
Emergency Generators	0.0	0.0	0.0	0.0	0.0	0.0
Cooling Towers	0.0	0.0	0.0	0.0	1.9	<0.1
Spray Booth	0.0	0.0	0.0	0.0	0.0	0.0
Delivery Trucks	1.3	11.2	8.7	<0.1	0.1	0.1
Fireworks	<0.1	<0.1	0.2	<0.1	0.3	0.3
Landscape	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.7	5.5	2.3	0.0	0.2	0.2
Architectural Coatings	0.0	0.0	0.0	0.0	0.0	0.0
Parking Structures	2.4	3.9	32.9	0.1	0.7	0.3
Pico Tunnel	1.5	12.7	13.4	0.1	0.2	0.1
Off-Site Emissions						
Electricity	0.9	99.4	17.3	10.4	3.5	3.5
Mobile	131.9	594.8	3,829.2	11.9	225.7	79.2
On-Site Total	***7.2***	***91.8***	***81.8***	***0.3***	***7.8***	***4.7***
Off-Site Total	***132.7***	***694.2***	***3,846.5***	***22.2***	***229.2***	***82.6***
Total Event Day Project Emissions	***207***	***786***	***3,928***	***23***	***237***	***87***
No Project Emissions—Event Day (17,000 attendance at LACC)						
On-Site Emissions						
Natural Gas Consumption	0.5	12.1	2.0	<0.1	<0.1	<0.1
Steam Cleaners	0.0	0.0	0.6	0.0	0.0	0.0
Propane Forklifts	<0.1	0.4	2.7	<0.1	<0.1	<0.1
Consumer Products	30.5	0.0	0.0	0.0	0.0	0.0
Charbroilers	0.1	2.6	2.3	<0.1	0.9	0.8
Emergency Generators	0.0	0.0	0.0	0.0	0.0	0.0
Cooling Towers	0.0	0.0	0.0	0.0	2.4	<0.1
Spray Booth	0.0	0.0	0.0	0.0	0.0	0.0
Delivery Truck	0.7	6.6	5.1	<0.1	0.1	0.1
Landscape	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.3	2.7	1.1	<0.1	0.1	0.1
Architectural Coatings	0.0	0.0	0.0	0.0	0.0	0.0

Table IV.F.1-7 (Continued)
Unmitigated Regional Operational Emissions—Buildout in Year 2017
(pounds per day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Off-Site Emissions						
Electricity	0.4	47.8	8.3	5.0	1.7	1.7
Mobile	9.0	30.6	227.6	0.6	11.7	4.0
On-Site Total	*32.2*	*24.4*	*13.8*	*<0.1*	*3.5*	*1.0*
Off-Site Total	*9.4*	*78.4*	*235.9*	*5.6*	*13.4*	*5.7*
Total No Project Event Day Emissions	***42***	***103***	***250***	***6***	***17***	***7***
No Project Emissions—Dark Day						
On-Site Emissions						
Natural Gas Consumption	0.2	3.6	0.6	<0.1	<0.1	<0.1
Steam Cleaners	<0.1	<0.1	0.6	<0.1	<0.1	<0.1
Propane Forklifts	<0.1	0.1	0.5	<0.1	<0.1	<0.1
Consumer Products	30.5	0.0	0.0	0.0	0.0	0.0
Charbroilers	0.0	0.0	0.0	0.0	0.0	0.0
Emergency Generators	4.1	40.6	15.2	0.8	3.5	3.5
Cooling Towers	0.0	0.0	0.0	0.0	1.0	<0.1
Spray Booth	4.3	0.0	0.0	0.0	0.0	0.0
Delivery Trucks	0.1	1.2	0.9	<0.1	<0.1	<0.1
Landscape	0.1	<0.1	2.8	<0.1	<0.1	<0.1
Miscellaneous	0.3	2.7	1.1	<0.1	0.1	0.1
Architectural Coatings	11.9	0.0	0.0	0.0	0.0	0.0
Off-Site Emissions						
Electricity	0.1	9.6	1.7	1.0	0.3	0.3
Mobile	0.3	2.1	16.2	<0.1	0.5	0.2
On-Site Total	*51.5*	*48.2*	*21.8*	*0.8*	*4.6*	*3.6*
Off-Site Total	*0.4*	*11.7*	*17.9*	*1.0*	*0.8*	*0.5*
Total No Project Dark Day Emissions	***52***	***60***	***40***	***2***	***5***	***4***
Project Event Day Incremental Emissions						
Compared to No Project Event Day	166	683	3,679	17	220	81
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Over/(Under)	110	628	3,129	(133)	70	26
Exceed Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
Compared to No Project Dark Day	155	726	3,889	21	232	83
SCAMQD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Over/(Under)	100	671	3,339	(129)	82	28
Exceed Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Numbers may not add up exactly due to rounding.
Worksheets and modeling output files are provided in Appendix M.
Source: Matrix Environmental, 2012.

an attendance level at the Event Center could occur up to 37 times per year. An attendance level between 45,000 and 64,999 is anticipated to occur approximately 10 times per year and an attendance level between 25,000 and 44,999 is anticipated to occur approximately five times per year. Since pollutant emissions are directly proportional to the number of trips/VMT associated with the attendance level, an attendance level between 25,000 and 44,999 would reduce the mobile source emissions between 28 and 50 percent in comparison to an attendance level of 91,550. Therefore, it is important to note that the emissions provided in Table IV.F.1-7 are anticipated to occur on a limited number of days per year and represent the upper-end of attendance.

In addition, as set forth in Section IV.B, Transportation, of this Draft EIR, the traffic analysis does not provide a credit for trip-reducing mitigation measures such as transit enhancements, as well as transit and carpooling incentives. Nor does it take any credit for the trip reduction measures required or carbon neutrality requirements under SB 292 discussed above. A reduction in trips would result in a corresponding reduction in VMT and emissions. Similarly, some of the local measures to reduce greenhouse gas emissions could also reduce criteria pollutant. Therefore, the air quality analysis is conservative and likely overstates actual emissions.

(b) Localized Operational Impacts

Localized operational Project emissions would result from onsite stationary sources, area sources (e.g., loading dock operations), onsite idling at the parking structures and passenger loading/unloading areas, and vehicles entering the freeway network. Emissions estimates for criteria air pollutants from on-site sources are presented in Table IV.F.1-8 on page IV.F.1-44. 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 screening-level analysis 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). As shown in Table IV.F.1-8, on-site operational emissions would exceed the localized significance threshold for NO_X and $PM_{2.5}$.

Following the guidance in the SCAQMD's *Final Localized Significance Threshold Methodology* (June 2003), if the screening level evaluation does not rule out significant impacts, a more detailed analysis is conducted. Downwind sensitive receptor locations are identified, and site-specific dispersion modeling is conducted to estimate project impacts. The detailed analysis is conducted using the Environmental Protection Agency's (EPA) preferred regulatory dispersion model (AERMOD).

Table IV.F.1-8
Unmitigated Maximum Daily Localized Operational Emissions—Buildout in Year 2017
(pounds per day)

Emission Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Proposed Project Emissions—Event Day				
On-Site Emissions				
Natural Gas Consumption	46.1	7.7	0.1	0.1
Steam Cleaners	<0.1	1.6	<0.1	<0.1
Propane Forklifts	0.6	4.6	<0.1	<0.1
Consumer Products	0.0	0.0	0.0	0.0
Charbroilers	11.6	10.5	4.3	3.8
Emergency Generators	0.0	0.0	0.0	0.0
Cooling Towers	0.0	0.0	1.9	0.1
Spray Booth	0.0	0.0	0.0	0.0
Delivery Truck	11.2	8.7	0.1	0.1
Fireworks	<0.1	0.2	0.3	0.3
Landscape	0.0	0.0	0.0	0.0
Miscellaneous	5.5	2.3	0.2	0.2
Architectural Coatings	0.0	0.0	0.0	0.0
L.A. Live Way and Bond Street Garages (Egress/Ingress and Queue Time)	*3.9*	*32.9*	*0.7*	*0.4*
Pico Tunnel (Bus Loading Area)	*12.7*	*13.4*	*0.2*	*0.1*
Total Event Day Project Emissions	*91.8*	*81.8*	*7.8*	*5.1*
No Project Emissions—Event Day (17,000 attendance at LACC)				
On-Site Emissions				
Natural Gas Consumption	12.1	2.0	<0.1	<0.1
Steam Cleaners	0.0	0.6	0.0	0.0
Propane Forklifts	0.4	2.7	<0.1	<0.1
Consumer Products	0.0	0.0	0.0	0.0
Charbroilers	2.6	2.3	0.9	0.8
Emergency Generators	0.0	0.0	0.0	0.0
Cooling Towers	0.0	0.0	2.4	<0.1
Spray Booth	0.0	0.0	0.0	0.0
Delivery Truck	6.6	5.1	0.1	0.1
Landscape	0.0	0.0	0.0	0.0
Miscellaneous	2.7	1.1	0.1	0.1
Architectural Coatings	0.0	0.0	0.0	0.0
Total No Project Event Day Emissions	*24.4*	*13.8*	*3.5*	*1.0*
No Project Emissions—Dark Day				
On-Site Emissions				
Natural Gas Consumption	3.6	0.6	<0.1	<0.1
Steam Cleaners	<0.1	0.6	<0.1	<0.1
Propane Forklifts	0.1	0.5	<0.1	<0.1

Table IV.F.1-8 (Continued)
Unmitigated Localized Operational Emissions—Buildout in Year 2017
(pounds per day)

Emission Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Consumer Products	0.0	0.0	0.0	0.0
Charbroilers	0.0	0.0	0.0	0.0
Emergency Generators	40.6	15.2	3.5	3.5
Cooling Towers	0.0	0.0	1.0	<0.1
Spray Booth	0.0	0.0	0.0	0.0
Delivery Trucks	1.2	0.9	<0.1	<0.1
Landscape	<0.1	2.8	<0.1	<0.1
Miscellaneous	2.7	1.1	0.1	0.1
Architectural Coatings	0.0	0.0	0.0	0.0
Total No Project Dark Day Emissions	*48.2*	*21.8*	*4.6*	*3.6*
Project Event Day Incremental Emissions				
Comparison to No Project Event Day	67.4	68.0	4.4	4.1
SCAMQD Localized Significance Threshold[a]	**66.3**	**2650.6**	**12.8**	**3.9**
Over/(Under)	**1.1**	**(2,582.7)**	**(8.5)**	**0.2**
Exceed Threshold?	**Yes**	**No**	**No**	**Yes**
Comparison to No Project Dark Day	43.6	60.0	3.2	1.5
SCAQMD Significance Threshold[a]	**66.3**	**2650.6**	**12.8**	**3.9**
Over/(Under)	**(22.7)**	**(2,590.6)**	**(9.6)**	**(2.4)**
Exceed Threshold?	**No**	**No**	**No**	**No**

Numbers may not add up exactly due to rounding.

Worksheets and modeling output files are provided in Appendix M.

[a] *SCAQMD LSTs based on SRA 1, 5-acre active site area, and operational emissions at a receptor distance of 76 meters (250 feet).*

Source: Matrix Environmental, 2012.

The SCAQMD's Final Localized Significance Threshold Methodology provides the following guidance as to what should be included in the analysis.

> "The primary emissions from operational activities include, but are not limited to NO_X and CO combustion emissions from stationary sources and/or on-site mobile equipment. Some operational activities may also include fugitive $PM_{2.5}$ and PM_{10} dust generating activities such as aggregate operations or earthmoving activities at landfills. Off-site mobile emissions from the project should NOT be included in the emissions compared to the LSTS. (Page 1-4)"

The above SCAQMD guidance recommends that off-site mobile emissions should not be addressed in the localized analysis of on-site sources. However, due to concern expressed from the public during scoping meetings regarding emissions from increased traffic, particularly on the freeway and local arterial roadways, Project-related traffic within 0.25 mile along freeways, on/off ramps, and local arterial roadways was included in the localized analysis. The SCAQMD recommends a radius distance of 0.25 mile for analyzing potential impacts to proposed residential uses from existing freeways and, therefore, this distance was used as an appropriate distance for this analysis to address potential impacts from additional traffic on the freeway and arterial system to nearby sensitive receptors. Because PM_{10} emissions do not exceed the SCAQMD LSTs, detailed dispersion modeling would normally not be performed for this pollutant. However, it has been determined that if PM_{10} emissions from Project-generated traffic along the freeway and arterial system within 0.25 mile of the Project Site was included in the screening level analysis, dispersion modeling would be warranted. Therefore, the localized effects from the on-site operational emissions of NO_X, PM_{10}, and $PM_{2.5}$ were analyzed using the AERMOD dispersion model.

The results of the dispersion modeling for NO_2 are presented in Table IV.F.1-9 on page IV.F.1-47. Sensitive receptors provided in Table IV.F.1-9 were selected based on their relatively close proximity to the Project Site and public concern over potential Project-related air quality impacts. They are considered to be representative, but do not constitute all of the sensitive receptors that could experience emissions levels in excess of significance thresholds. The maximum residential receptor would represent the worst-case impacts for sensitive land uses. Pollutant concentration isopleths that show the extent of the potential NO_2 impacts are included in Appendix M. As shown in Table IV.F.1-9, the maximum hourly state NO_2 incremental concentration of 245.6 $\mu g/m^3$ and 205.8 $\mu g/m^3$ for the maximum hourly federal NO_2 incremental concentration are predicted to occur at the residential uses to the west of the Project Site, which would exceed their respective state and federal hourly thresholds. Therefore, NO_X impacts would be significant with respect to localized emissions from operational activities.

For comparison purposes, the Future No Project Event Day and Future No Project Dark Day scenarios were also analyzed. As shown in Table IV.F.1-9, the maximum federal and state hourly NO_2 incremental concentrations for the Future No Project Event Day are 97.6 $\mu g/m^3$ and 83.5 $\mu g/m^3$, respectively; and would result in exceedances to the federal hourly NO_2 standard if these emissions were considered to be new emissions. The maximum federal and state hourly incremental concentrations for the No Project Dark Day are 18.6 $\mu g/m^3$ and 17.1 $\mu g/m^3$, respectively; and would not result in exceedances to the state and federal NO_2 hourly standards, if these emissions were considered to be new emissions. Assuming that the maximum concentrations for the Project Event Day and Future No Project Event Day scenarios occur within the same hour, then the state and federal hourly incremental change as a result of the Project would be reduced to

Table IV.F.1-9
Maximum Ambient Operation NO_2 Impacts

Pollutant	Pico Union Residences	Toberman Park	Carver Apartments	Mohan High School	Grand/Hope Park (FIDM)	Maximum Residential
Proposed Project—Event Day						
1-Hr Concentration)(µg/m^3)						
Project Operations Subject to CAAQS[a]	245.6	78.9	138.1	172.6	101.2	245.6
CAAQS Background	225.6	225.6	225.6	225.6	225.6	225.6
CAAQS Background + Increment	471.2	304.5	363.7	398.2	326.8	471.2
SCAQMD Threshold	339.0	339.0	339.0	339.0	339.0	339.0
Significant Impact?	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**
Project Operations Subject to NAAQS[c]	205.8	51.0	119.4	143.9	78.7	205.8
NAAQS Background	142.3	142.3	142.3	142.3	142.3	142.3
NAAQS Background + Increment	348.0	193.2	261.7	286.2	221.0	348.0
SCAQMD Threshold	188.0	188.0	188.0	188.0	188.0	188.0
Significant Impact?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Future No Project—Event Day						
1-Hr Concentration (µg/m^3)						
Future No Project Operations	50.6	19.7	33.1	66.2	21.2	97.6
CAAQS Background	225.6	225.6	225.6	225.6	225.6	225.6
CAAQS Background + Increment	276.2	245.3	258.7	291.8	246.8	323.2
SCAQMD Threshold	339.0	339.0	339.0	339.0	339.0	339.0
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**
Future No Project Operations	40.3	15.8	28.2	50.6	16.7	83.5
NAAQS Background	142.3	142.3	142.3	142.3	142.3	142.3
NAAQS Background + Increment	182.6	158.0	170.5	192.8	159.0	225.7
SCAQMD Threshold	188.0	188.0	188.0	188.0	188.0	188.0
Significant Impact?	**No**	**No**	**No**	**Yes**	**No**	**Yes**
Future No Project—Dark Day						
1-Hr Concentration (µg/m^3)						
Future No Project Operations	12.8	4.6	7.9	13.2	4.9	18.6
CAAQS Background	225.6	225.6	225.6	225.6	225.6	225.6
CAAQS Background + Increment	238.4	230.2	233.5	238.8	230.5	244.2
SCAQMD Threshold	339.0	339.0	339.0	339.0	339.0	339.0
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**
Future No Project Operations	10.4	3.6	6.7	10.8	4.0	17.1
NAAQS Background	142.3	142.3	142.3	142.3	142.3	142.3
NAAQS Background + Increment	152.6	145.9	149.0	153.1	146.3	159.4
SCAQMD Threshold	188.0	188.0	188.0	188.0	188.0	188.0
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**

Table IV.F.1-9 (Continued)
Maximum Ambient Operation NO_2 Impacts

Pollutant	Pico Union Residences	Toberman Park	Carver Apartments	Mohan High School	Grand/Hope Park (FIDM)	Maximum Residential
Future Proposed Project less Future No Project (Annual Concentration ($\mu g/m^3$))						
Future Project less Future No Project Operations	3.1	0.9	1.2	1.4	2.5	5.4
Background	56.2	56.2	56.2	56.2	56.2	56.2
Background + Increment	59.3	57.1	57.5	57.7	58.7	61.6
SCAQMD Threshold (CAAQS)	57.0	57.0	57.0	57.0	57.0	57.0
Significant Impact?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

[a] *CAAQS requires that the maximum concentration be used in comparison to the standard in order to determine significance.*

[b] *Maximum 1-hour concentration occurs at the residences at the Ritz located north of the Project Site.*

[c] *NAAQS requires that the 98th percentile (also equal to the 8th highest concentration) be used in comparison to the standard in order to determine significance.*

[d] *Maximum annual concentration occurs at residential uses south of the Project Site.*

[e] *Maximum annual concentration occurs at future planned residential uses east of the Project Site.*

Source: Matrix Environmental, 2012.

148.0 $\mu g/m^3$ and 122.3 $\mu g/m^3$, respectively.[24] This incremental change between the Proposed Project Event Day and the No Project Event Day also exceeds the respective standards. Assuming that the maximum concentrations for the Project Event Day and Future No Project Event Day scenarios occur within the same hour, then potential significant localized 1-hour NO_2 impacts could encompass land uses within the following area for the state standard: (1) 800 feet north of the Project Site near Olympic Boulevard; (2) 550 feet west of the Project Site near Albany Street; (3) 1,500 feet south of the Project Site near 17th Street; and (4) 350 feet east of the Project Site near Flower Street. Potential significant localized 1-hour NO_2 impacts could encompass land uses within the following area for the national standard: (1) 2,400 feet north of the Project Site near 8th Street; (2) 1,300 feet west of the Project Site near Toberman Street; (3) 2,900 feet south of the Project Site near Washington Boulevard; and (4) 1,700 feet east of the Project Site near Olive Street. Please refer to Appendix M for 1-hour NO_2 impact isopleths delineating the

[24] *This analysis conservatively assumes that the maximum Project 1-hour NO_2 concentration would not occur concurrently with the maximum Future No Project Event Day due to of the variability of hourly activity on the Project Site and, therefore, the baseline concentration was assumed to be zero during the maximum Project 1-hour impact.*

impact area for all Proposed Project impact scenarios (e.g., Project Event Day, No Project Event Day, and No Project Dark Day).

Annual NO_2 localized impacts reflect the incremental change between the Future Proposed Project and the Future No Project conditions. As shown in Table IV.F.1-9, the maximum federal annual NO_2 incremental concentration of 5.4 $\mu g/m^3$, is predicted to occur at the newly proposed residential uses located to the east of the Project Site. This incremental change would exceed the federal annual NO_2 standard. The potential localized annual NO_2 impacts could encompass land uses within the following area: (1) 2,700 feet north of the Project Site near 8th Street; (2) 350 feet west of the Project Site before Albany Street; (3) 2,400 feet south of the Project Site near Washington Boulevard; and (4) 2,100 feet east of the Project Site near Hill Street. Detailed modeling results are provided in Appendix M of this Draft EIR.

The results of the dispersion modeling for PM_{10} and $PM_{2.5}$ are presented in Table IV.F.1-10 on page IV.F.1-50. Sensitive receptors provided in Table IV.F.1-10 were selected based on their relatively close proximity to the Project Site and public concern over potential Project-related air quality impacts. The maximum residential receptor would represent the worst-case impacts. Pollutant concentration isopleths that show the extent of the potential PM_{10} and $PM_{2.5}$ impacts are included in Appendix M. As shown in Table IV.F.1-10, the maximum Project versus No Project incremental 24-hour PM_{10} concentration of 4.16 $\mu g/m^3$ was predicted to occur at the residential uses to the west of the Project Site across from the L.A. Live Way Garage and would exceed the significance threshold. Potential localized 24-hour PM_{10} impacts could encompass sensitive land uses within the following areas: (1) West of the Project Site to approximately 150 east of Albany Street between 12th Street and Olympic Boulevard; (2) West of the Project Site east of Oak Street between Venice Boulevard and 14th Street; (3) South of the Project Site on the north side of I-10 along Wright Street; (4) South of the Project Site to approximately 150 feet south of 17th Street between Georgia Street and Figueroa Street; and (5) East of the Project Site on the north side of I-10 approximately 130 feet south Venice Boulevard between Hope Street and Grand Avenue.

The predominant source of PM_{10} impacts is from Project-related traffic accessing the freeway system. As shown in Table IV.F.1-10, maximum 24-hour $PM_{2.5}$ and annual PM_{10} concentrations would not exceed the localized significance thresholds. Therefore, with respect to localized impacts from operational activities, 24-hour PM_{10} as well as 1-hour and annual NO_2 impacts would be significant.

These impacts are anticipated for an event with an attendance level of 72,000 at the Event Center combined with an attendance level of 19,550 at the Los Angeles Convention Center. Such an attendance level at the Event Center could occur up to 37 times per year.

Table IV.F.1-10
Maximum Ambient Operation PM_{10} and $PM_{2.5}$ Impacts

Pollutant	Pico Union Residences	Toberman Park	Carver Apartments	Mohan High School	Grand/Hope Park (FIDM)	Maximum Residential
Proposed Project—Event Day Compared To No Project Event Day						
PM_{10} (24-Hr Concentration) ($\mu g/m^3$)						
Project Operations	4.16	0.67	3.06	2.88	0.90	4.16
SCAQMD Threshold	2.50	2.50	2.50	2.50	2.50	2.50
Significant Impact?	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**
PM_{10} (Annual Concentration) ($\mu g/m^3$)						
Project Operations	0.44	0.05	0.23	0.22	0.04	0.44
SCAQMD Threshold	1.00	1.00	1.00	1.00	1.00	1.00
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**
$PM_{2.5}$ (24-Hr Concentration) ($\mu g/m^3$)						
Project Operations	1.92	0.38	1.04	1.23	0.66	1.92
SCAQMD Threshold	2.50	2.50	2.50	2.50	2.50	2.50
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**
Proposed Project—Event Day Compared To No Project Dark Day						
PM_{10} (24-Hr Concentration) ($\mu g/m^3$)						
Project Operations	4.37	0.75	3.13	3.16	0.99	4.37
SCAQMD Threshold	2.50	2.50	2.50	2.50	2.50	2.50
Significant Impact?	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**
PM_{10} (Annual Concentration) ($\mu g/m^3$)						
Project Operations	0.50	0.05	0.25	0.26	0.17	0.50
SCAQMD Threshold	1.00	1.00	1.00	1.00	1.00	1.00
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**
$PM_{2.5}$ (24-Hr Concentration) ($\mu g/m^3$)						
Project Operations	2.22	0.45	1.11	1.49	0.73	2.22
SCAQMD Threshold	2.50	2.50	2.50	2.50	2.50	2.50
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *CAAQS requires that the maximum concentration be used in comparison to the standard in order to determine significance.*

[b] *Maximum concentration occurs at the residences located west of the Project Site.*

Source: Matrix Environmental, 2012.

An attendance level between 45,000 and 64,999 is anticipated to occur approximately ten times per year and an attendance level between 25,000 and 44,999 is anticipated to occur approximately five times per year. Since off-site pollutant emissions are directly proportional to the number of trips/VMT associated with the attendance level, an attendance level between 25,000 and 44,999 would reduce the mobile source emissions and parking structure emissions between 28 and 50 percent in comparison to an

attendance level of 91,550. On-site emissions would also be reduced with reduced attendance. Also, it is important to note that the maximum pollutant concentrations are predicted using AERMOD which models two years of SCAQMD meteorological conditions (17,520 hours) and the concentrations presented in Table IV.F.1-9 and Table IV.F.1-10 reflect the worst-case hourly meteorological conditions during that period. The impacts shown in Table IV.F.1-9 and Table IV.F.1-10 only occur if worst case meteorological conditions coincide with a capacity event at the Event Center and a peak event at the Convention Center. Based on SCAQMD data, there are between two and 20 days a year, depending on the selected sensitive receptor, for PM_{10} impacts when meteorological conditions occur that have the potential to yield these forecasted levels. This represents between approximately 0.5 and 5 percent of the days in a year. Capacity events occur at the Event Center approximately 10 percent of the year. The same is true with regard to peak activity levels at the Convention Center. Based on these probabilities of occurrence, the frequency when all three of these events coincide on the same day, which is required to yield the impacts shown in Table IV.F.1-9 and Table IV.F.1-10, is anticipated to be much less than the maximum of 20 times per year based on meteorological data alone. So while significant impacts are forecasted to occur, these significant impacts may not occur at all given the probability of each event to occur individually, much less all three at the same time.

The SCAQMD recommends an evaluation of potential localized CO impacts when a project causes the level of service (LOS) at a study intersection to worsen from C to D, or if a project increases the volume-to-capacity (V/C) ratio at any intersection rated D or worse by 2 percent or more. As detailed in Section IV.K, Traffic, Access, and Parking, project traffic was analyzed for three daily scenarios (weekday, Saturday, and Sunday) in combination with three event scenarios (Event Center active, Event Center active with Los Angeles Convention Center dark, and Event Center active with events at Dodger Stadium and the Los Angeles Memorial Coliseum); for a total of nine combined scenarios (both pre- and post-event. The following list shows how many intersection locations would meet the SCAQMD criteria for each scenario for the Proposed Project:[25]

- Weekday—85 intersections
- Weekday LACC Dark—88 intersections
- Saturday—58 intersections

[25] *In addition to the scenarios discussed below, an analysis of the Proposed Project with a concurrent event at the Coliseum and at Dodger Stadium has been conducted for informational purposes. The results of this analysis are presented in Appendix M to this Draft EIR.*

- Saturday compared to LACC Dark—58 intersections
- Sunday—24 intersections
- Sunday compared to LACC Dark—25 intersections

The localized CO hotspot screening analysis conducted for the identified intersections demonstrated that the Proposed Project would not cause any new or exacerbate any existing CO hotspots. Please refer to Appendix M for the CO hotspot screening analysis. To further support this conclusion, CO concentration levels were forecasted at the five potentially most impacted intersections per scenario based on the highest Project-related increase in V/C ratio using the CALINE4 dispersion model developed by the California Department of Transportation, using peak-hour traffic volumes and conservative meteorological assumptions.

Conservative meteorological conditions include low wind speed, stable atmospheric conditions, and the wind angle producing the highest CO concentrations for each case. CO concentrations were modeled under the future (2017) No Project Event Day and Future With Project conditions.[26] As shown in Table IV.F.1-11 on page IV.F.1-53, project-generated traffic volumes are forecasted to have a negligible effect on the projected 1-hour and 8-hour CO concentrations at each of the intersection locations analyzed. Thus, the Proposed Project would not cause any new or exacerbate any existing CO hotspots, and, as a result, impacts related to localized mobile-source CO emissions would be less than significant.

As with the localized CO hot spot analysis for intersections, a similar analysis was conducted for the two proposed parking structures. The analysis utilizes the AERMOD dispersion model to calculate CO concentrations resulting from vehicle emissions within the parking structures. As shown in Table IV.F.1-12 on page IV.F.1-57, parking structure traffic volumes are forecasted to have a negligible effect on the projected 1-hour and 8-hour CO concentrations in the surrounding area. Thus, impacts related to localized mobile-source CO emissions would be less than significant.

(3) Toxic Air Contaminants

This section evaluates potential impacts to neighboring properties that may result from TAC emissions associated with long-term operation of the Project. The primary

[26] *The Mobility Group, Convention Center Modernization and Farmers Field Project—EIR Transportation Study, November 2011.*

Table IV.F.1-11
Local Area Carbon Monoxide Dispersion Analysis

Intersection	Peak Period[a]	Maximum 1-Hour 2017 Base Concentration[b] (ppm)	Maximum 1-Hour 2017 w/ Project Concentration[c] (ppm)	Significant 1-Hour Impact?[d] (>20 ppm)	Maximum 8-Hour 2017 Base Concentration[e] (ppm)	Maximum 8-Hour 2017 w/ Project Concentration[f] (ppm)	Significant 8-Hour Impact? (>9.0 ppm)[d]
Weekday							
Figueroa St at 9th St	Pre-Event	6.4	6.6	No	5.3	5.4	No
	Post-Event	5.7	5.8	No	5.0	5.0	No
Figueroa St at 6th St	Pre-Event	6.3	6.7	No	5.3	5.5	No
	Post-Event	5.7	5.9	No	5.0	5.0	No
Figueroa St at 5th St	Pre-Event	6.4	6.5	No	5.4	5.4	No
	Post-Event	5.7	6.1	No	5.0	5.2	No
Hoover St at Venice Blvd	Pre-Event	6.3	6.4	No	5.3	5.3	No
	Post-Event	5.7	5.9	No	5.0	5.0	No
Hoover St at Washington Blvd	Pre-Event	6.4	6.5	No	5.4	5.4	No
	Post-Event	5.7	5.8	No	5.0	5.0	No
Weekday—LACC Dark							
Figueroa St at 9th St	Pre-Event	6.3	6.6	No	5.3	5.4	No
	Post-Event	5.7	5.8	No	5.0	5.0	No
Figueroa St at 6th St	Pre-Event	6.3	6.7	No	5.3	5.5	No
	Post-Event	5.7	5.9	No	5.0	5.0	No
Figueroa St at 5th St	Pre-Event	6.4	6.5	No	5.4	5.4	No
	Post-Event	5.7	6.1	No	5.0	5.2	No
Hoover St at Venice Blvd	Pre-Event	6.3	6.4	No	5.3	5.3	No
	Post-Event	5.7	5.9	No	5.0	5.0	No
Hoover St at Washington Blvd	Pre-Event	6.4	6.5	No	5.3	5.4	No
	Post-Event	5.7	5.8	No	5.0	5.0	No

Table IV.F.1-11 (Continued)
Local Area Carbon Monoxide Dispersion Analysis

Intersection	Peak Period[a]	Maximum 1-Hour 2017 Base Concentration[b] (ppm)	Maximum 1-Hour 2017 w/ Project Concentration[c] (ppm)	Significant 1-Hour Impact?[d] (>20 ppm)	Maximum 8-Hour 2017 Base Concentration[e] (ppm)	Maximum 8-Hour 2017 w/ Project Concentration[f] (ppm)	Significant 8-Hour Impact? (>9.0 ppm)[d]
Saturday							
Figueroa St at Olympic Blvd	Pre-Event	6.1	6.5	No	5.2	5.4	No
	Post-Event	6.1	6.4	No	5.2	5.4	No
Figueroa St at Adams Blvd	Pre-Event	6.4	6.4	No	5.3	5.4	No
	Post-Event	6.4	6.4	No	5.3	5.3	No
Figueroa St at Wilshire Blvd	Pre-Event	5.7	5.8	No	5.0	5.0	No
	Post-Event	5.8	6.3	No	5.0	5.2	No
Vermont Ave at Olympic Blvd	Pre-Event	6.5	6.6	No	5.4	5.4	No
	Post-Event	6.2	6.3	No	5.2	5.2	No
Hoover St at Washington Blvd	Pre-Event	6.1	6.2	No	5.2	5.2	No
	Post-Event	6.2	6.3	No	5.2	5.3	No
Saturday—LACC Dark							
Figueroa St at Olympic Blvd	Pre-Event	6.1	6.5	No	5.2	5.4	No
	Post-Event	6.1	6.4	No	5.2	5.4	No
Figueroa St at Adams Blvd	Pre-Event	6.4	6.4	No	5.3	5.4	No
	Post-Event	6.4	6.4	No	5.3	5.3	No
Figueroa St at Wilshire Blvd	Pre-Event	5.7	5.8	No	5.0	5.0	No
	Post-Event	5.8	6.3	No	5.0	5.2	No
Vermont Ave at Olympic Blvd	Pre-Event	6.5	6.6	No	5.4	5.4	No
	Post-Event	6.2	6.3	No	5.2	5.2	No
Hoover St at Washington Blvd	Pre-Event	6.1	6.2	No	5.2	5.2	No
	Post-Event	6.2	6.3	No	5.2	5.3	No

Table IV.F.1-11 (Continued)
Local Area Carbon Monoxide Dispersion Analysis

Intersection	Peak Period[a]	Maximum 1-Hour 2017 Base Concentration[b] (ppm)	Maximum 1-Hour 2017 w/ Project Concentration[c] (ppm)	Significant 1-Hour Impact?[d] (>20 ppm)	Maximum 8-Hour 2017 Base Concentration[e] (ppm)	Maximum 8-Hour 2017 w/ Project Concentration[f] (ppm)	Significant 8-Hour Impact? (>9.0 ppm)[d]
Sunday							
Broadway at 17th St	Pre-Event	5.6	6.5	No	4.8	5.2	No
	Post-Event	5.6	6.3	No	4.8	5.2	No
Western Ave at Olympic Blvd	Pre-Event	6.0	6.1	No	5.1	5.1	No
	Post-Event	6.3	6.3	No	5.2	5.2	No
Vermont Ave at Olympic Blvd	Pre-Event	6.1	6.2	No	5.2	5.2	No
	Post-Event	6.2	6.4	No	5.2	5.3	No
Vermont Ave at Pico Blvd	Pre-Event	6.1	6.2	No	5.2	5.2	No
	Post-Event	6.1	6.1	No	5.1	5.2	No
Hoover St at Venice Blvd	Pre-Event	5.9	5.9	No	5.0	5.1	No
	Post-Event	6	6.1	No	5.1	5.2	No
Sunday—LACC Dark							
Broadway at 17th St	Pre-Event	5.7	6.5	No	4.8	5.2	No
	Post-Event	5.6	5.7	No	4.8	4.9	No
Western Ave at Olympic Blvd	Pre-Event	6.0	6.1	No	5.1	5.1	No
	Post-Event	6.3	6.3	No	5.2	5.2	No
Vermont Ave at Olympic Blvd	Pre-Event	6.1	6.2	No	5.2	5.2	No
	Post-Event	6.2	6.4	No	5.2	5.3	No
Vermont Ave at Pico Blvd	Pre-Event	6.1	6.2	No	5.2	5.2	No
	Post-Event	6.1	6.1	No	5.1	5.2	No
Hoover St at Venice Blvd	Pre-Event	5.9	5.9	No	5.0	5.1	No
	Post-Event	5.9	6.1	No	5.1	5.2	No

Table IV.F.1-11 (Continued)
Local Area Carbon Monoxide Dispersion Analysis

Intersection	Peak Period[a]	Maximum 1-Hour 2017 Base Concentration[b] (ppm)	Maximum 1-Hour 2017 w/ Project Concentration[c] (ppm)	Significant 1-Hour Impact?[d] (>20 ppm)	Maximum 8-Hour 2017 Base Concentration[e] (ppm)	Maximum 8-Hour 2017 w/ Project Concentration[f] (ppm)	Significant 8-Hour Impact? (>9.0 ppm)[d]

ppm = parts per million

[a] *Peak hour traffic volumes are based on the Traffic Impact Study prepared for the Project by The Mobility Group, November 2011.*

[b] *SCAQMD 2017 1-hour ambient background concentration (5.1 ppm) + 2017 Base (related projects traffic CO 1-hour contribution.*

[c] *SCAQMD 2017 1-hour ambient background concentration (5.1 ppm) + 2017 with project traffic CO 1-hour contribution.*

[d] *The most restrictive standard for 1-hour CO concentrations is 20 ppm and for 8-hour concentrations is 9.0 ppm.*

[e] *SCAQMD 2017 8-hour ambient background concentration (4.6 ppm) + 2017 Base (related projects traffic CO 8-hour contribution.*

[f] *SCAQMD 2017 8-hour ambient background concentration (4.6 ppm) + 2017 with project traffic CO 8-hour contribution.*

Source: Matrix Environmental, 2011; emission factor and dispersion modeling output sheets are provided in Appendix M.

Table IV.F.1-12
Local Area Parking Structure Carbon Monoxide Dispersion Analysis

Emission Source	Maximum 1-Hour Concentration[a] (ppm^3)	Significant 1-Hour Impact? (>20.0 ppm)	Maximum 8-Hour Concentration[b] (ppm)	Significant 8-Hour Impact? (>9.0 ppm)
Bond Street Garage	7.28	No	5.28	No
L.A. Live Way Garage	11.51	No	6.28	No
Combined Structures	11.51	No	6.28	No

ppm = parts per million

[a] *1-hour ambient background concentration (5.1 ppm) + projects traffic CO 1-hour contribution.*

[b] *8-hour ambient background concentration (4.6 ppm) + project traffic CO 8-hour contribution.*

Source: Matrix Environmental, 2012; emission factor and dispersion modeling output sheets are provided in Appendix M.

sources of potential air toxics associated with the Proposed Project operations include DPM from on-site idling of diesel delivery trucks at loading docks, emergency backup generators, and charbroilers. The SCAQMD recommends that health risk assessments be conducted for substantial sources of DPM (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[27] The CARB siting guidelines define a warehouse as having more than 100 truck trips or 40 refrigerated truck trips per day, and recommend siting such facilities at least 1,000 feet away from sensitive land uses. While the closest sensitive receptor is located within 300 feet of the closest existing loading dock and 750 feet of the closest proposed loading dock, the Proposed Project is only expected to add 35 daily truck trips to existing conditions for a total of 71 truck trips per day, of which approximately 10 percent would be refrigerated trucks. Based on this guidance, the Project is not considered to be a substantial source of DPM warranting a refined HRA. However, to be conservative a refined HRA was conducted for the Proposed Project.

Analysis of localized air toxic impacts from TAC emissions to nearby sensitive receptors was conducted to assess potential risk. This analysis includes diesel exhaust emissions associated with buses, delivery trucks, delivery trucks with TRUs, on-site emergency generators, and miscellaneous diesel sources along with TACs from combustion of natural gas (e.g., boilers), charbroilers, and the existing fueling station. A detailed discussion of methodology and results of the health risk assessment (HRA) is

[27] *Refer to page 9 of Appendix M.1.*

provided in Appendix M. The HRA accounts for CARB mandated ATCM limits for diesel fueled commercial vehicles allowing no more than 5 minutes of idle time at any given time. combustion of natural gas (e.g., boilers), charbroilers, and the existing fueling station. A detailed discussion of methodology and results of the health risk assessment (HRA) is provided in Appendix M. The HRA accounts for CARB mandated ATCM limits for diesel fueled commercial vehicles allowing no more than 5 minutes of idle time at any given time. In addition, proposed back-up diesel powered emergency generators would be required to comply with all applicable rules and regulations including BACT.

As shown in Table IV.F.1-13 on page IV.F.1-59, the results of the HRA yields a maximum off-site incremental individual cancer risk of 3.3 in a million at the residences located to the north of the Project Site (The Ritz-Carlton Residences at L.A. LIVE) and an excess cancer burden of less than 0.1. The maximum chronic and acute risk occurs within this same residential area north of the Project Site. The maximum incremental chronic and acute risk is 0.07 and 0.02, respectively. DPM was the predominant TAC and the diesel emergency generators were the predominant TAC source. As the Proposed Project would not emit carcinogenic or toxic air contaminants that result in impacts which exceed the maximum individual cancer risk of ten in one million, an excess cancer burden of 0.5, or the chronic or acute index of 1.0, Project-related toxic emission impacts would be less than significant.

Typical sources of acutely and chronically hazardous toxic air contaminants include industrial manufacturing processes. The Proposed Project would not include any of these potential sources. It is expected that quantities of any hazardous toxic air contaminants located on-site would be below thresholds warranting further study under the California Accidental Release Prevention (CalARP) program. As such, the Proposed Project would not release substantial amounts of toxic contaminants, and no significant impact on human health would occur.

(4) Odors

According to the Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified by the SCAQMD as being associated with odors and ongoing facility operations have not received any notices of violation or notices

Table IV.F.1-13
Operational Emissions Health Risk Assessment

Scenario	Cancer Risk Sum	Cancer Burden	Chronic Hazard Index	Acute Hazard Index
Project	11.3×10^{-6}	<0.1	0.11	<0.01
No Project	8.03×10^{-6}	<0.1	0.04	0.02
Incremental Increase	3.3×10^{-6}	<0.1	0.07	0.02

Source: Matrix Environmental, 2012.

to comply associated with odors over the last two decades.[28] The Proposed Project does include uses which have the potential to emit odors through cooking and charbroilers. However, the Project would minimize the release of odors from restaurant uses with odor reducing equipment as necessary. Garbage collection areas for the Project would be covered and situated away from the property line and sensitive uses. Good housekeeping practices would be sufficient to prevent nuisance odors. Therefore, potential odor impacts would be less than significant.

(5) Concurrent Construction and Operational Emissions

Portions of the Project Site would be completed and occupied while construction of the later Project components would be ongoing. Therefore, concurrent construction and operational impacts were evaluated. Based on a review of the Project components, it was determined that the maximum concurrent emissions could potentially occur during excavation of Event Center and completion of the New Hall. As summarized in Table IV.F.1-14 on page IV.F.1-60, concurrent construction and operational regional emissions of VOC, NO_X, and CO would exceed SCAQMD regional thresholds. Additionally, concurrent construction and operational localized emissions of NO_X, PM_{10}, and $PM_{2.5}$ would exceed their respective localized thresholds prior to implementation of mitigation measures.

(6) SCAQMD CEQA Air Quality Handbook Policy Analysis

In accordance with the procedures established in the SCAQMD Handbook, the following criteria are required to be addressed to determine the Proposed Project's consistency with SCAQMD and SCAG policies:

[28] *SCAQMD FIND database search for LA City Dept of Gen Services, Facility ID# 27497, Staples Center, Facility ID# 118648, and LA Live, Facility ID#s 152332 and 152603. Database searched on November 22, 2011.*

Table IV.F.1-14
Concurrent Operation and Construction Emissions[a]
(pounds per day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Regional Emissions						
Regional Operational Emissions—Event Day						
No Project (2014)—LACC (17,000 attendance)	**46**	**112**	**329**	**6**	**17**	**7**
Proposed Project (2014)—New Hall (19,550 attendance)	**53**	**99**	**375**	**3**	**17**	**6**
Net Regional Operational Emissions	**7**	**(13)**	**46**	**(3)**	**0**	**0**
Regional Construction Emissions						
Proposed Project (Post-Completion of New Hall)	127	612	881	1	102	40
Total Proposed Project Regional Overlap	134	599	927	(2)	102	40
SCAQMD Construction Thresholds	75	100	550	150	150	55
Exceed Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**
Regional Operational Emissions—Dark Day						
No Project (2014)—LACC (Dark Day)	52	59	36	2	5	4
Proposed Project (2014)—New Hall (19,550 attendance)	53	99	375	3	17	6
Net Regional Operational Emissions	0	40	339	1	12	2
Regional Construction Emissions						
Proposed Project (Post-Completion of New Hall)	127	612	881	1	102	40
Total Proposed Project Regional Overlap	**127**	**652**	**1,220**	**2**	**114**	**42**
SCAQMD Construction Thresholds	75	100	550	150	150	55
Exceed Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**
Localized Emissions						
Localized Operational Emissions—Event Day						
No Project (2014)—LACC (17,000 attendance)	32	24	14	<1	3	1
Proposed Project (2014)—New Hall (19,550 attendance)	37	35	19	<1	3	1
Net Localized Operational Emissions	5	10	5	<1	0	0
Localized Construction Emissions						
Proposed Project (Post-Completion of New Hall)	96	377	217	1	65	28
Total Proposed Project Localized Overlap	101	387	223	1	65	28
SCAQMD Localized Significance Thresholds[b]	N/A	66	2,651	N/A	53	15
Exceed Threshold?	**N/A**	**Yes**	**No**	**N/A**	**Yes**	**Yes**
Localized Operational Emissions						
No Project (2014)—LACC (Dark Day)	52	49	22	1	5	4
Proposed Project (2014)—New Hall (19,550 attendance)	37	35	19	<1	3	1
Net Localized Operational Emissions	(14)	(13)	(3)	(1)	(1)	(2)
Localized Construction Emissions						
Proposed Project (Post-Completion of New Hall)	96	377	217	1	65	28
Total Proposed Project Localized Overlap	**82**	**363**	**215**	**<1**	**64**	**25**
SCAQMD Localized Significance Thresholds[b]	N/A	66	2,651	N/A	53	15
Exceed Threshold?	**N/A**	**Yes**	**No**	**N/A**	**Yes**	**Yes**

Numbers may not add up exactly due to rounding.

[a] *Worksheets and modeling output files are provided in Appendix M.*

[b] *SCAQMD LSTs based on SRA 1, 5 acre active site area, and 76 meter (250 feet) receptor distance.*

Source: Matrix Environmental, 2012.

- Will the project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations; or
  - 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?

As discussed in the preceding Section IV.B.3.d, localized concentrations of PM_{10}, $PM_{2.5}$, CO, and NO_2 have been analyzed for the Project. SO_2 emissions would be negligible during construction and long-term operations, and therefore would not have potential to cause or affect a violation of the SO_2 ambient air quality standard. Because VOCs are not a criteria pollutant, there is no ambient standard or localized threshold for VOCs. Due to the role VOCs play in ozone 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 Proposed 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 $PM_{2.5}$. Results of the analyses presented in Table IV.F.1-16 on page IV.F.1-77 indicate that the increases in PM_{10} and $PM_{2.5}$ emissions during construction, with the incorporation of mitigation measures, would not exceed the SCAQMD-recommended localized significance thresholds.

The Proposed 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.F.1-16 on page IV.F.1-77, CO concentrations would not exceed the SCAQMD localized significance thresholds; however, the Project does exceed the SCAMQD localized significance threshold for NO_2 even with incorporation of mitigation. A refined analysis of potential NO_2 impacts during construction was conducted and incorporated proposed mitigation measures. As shown in Table IV.F.1-17 on page IV.F.1-79, the maximum hourly NO_2 incremental concentrations of 38.8 $\mu g/m^3$ and 98th percentile hourly incremental threshold concentration of 32.5 $\mu g/m^3$ would not exceed the state 1-hour threshold or federal 1-hour threshold at any of the identified sensitive receptors, respectively. However, the annual NO_2 incremental concentration of 1.3 $\mu g/m^3$ would exceed the federal threshold. This impact would occur at the Ritz-Carlton Residences at L.A. LIVE and would be representative of pollutant concentrations for either residential or commercial land uses in the immediate vicinity of the

Project Site. Although hourly NO_2 concentrations would not exceed the state and federal thresholds at sensitive receptors, the area of impact for non-sensitive receptors would encompass areas immediately north of the Project Site between L.A. Live Way and Figueroa Street. Potential localized state 1-hour NO_2 impacts above the incremental threshold of 113 µg/m^3 on the peak construction day could extend northward approximately 150 feet and encompass portions of the existing parking structure on the corner of Chick Hearn Court and L.A. Live Way and a portion of the Nokia Theatre. Potential localized federal 1-hour NO_2 impacts above the incremental threshold of 46 µg/m^3 on the peak construction day could extend northward approximately 280 feet and also encompass the existing parking structure on the corner of Chick Hearn Court and L.A. Live Way and the Nokia Theatre. Potential localized federal annual NO_2 impacts above the incremental threshold of 0.8 µg/m^3 during the peak year of construction could extend northward to Olympic Blvd and would also encompass Ritz-Carlton Residences at L.A. LIVE. All land uses (e.g., commercial, retail, office, industrial, and residential) within these areas could potentially be impacted by localized hourly NO_2 concentrations in excess of the state and federal standards during construction. This impact would be temporary in nature, lasting only for the construction period, and would not have a long-term impact on the region's ability to meet state and federal air quality standards.

Because this Proposed Project does 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. Based on methodologies set forth by the SCAQMD, one measure of local area air quality impacts that can indicate whether the Proposed Project would cause or affect a violation of an air quality standard would be based on the estimated CO concentrations at selected receptor locations located in close proximity to the Project Site. As indicated earlier, CO emissions were analyzed using the CALINE-4 model. No violations of the state and federal CO standards are projected to occur as shown in Table IV.F.1-11 on page IV.F.1-53.

As discussed above, a detailed analysis of potential localized operational impacts from on site activities was conducted. Based on the analysis, localized CO and $PM_{2.5}$ operational impacts would be less than significant. However, operational emissions of PM_{10} on a peak day and NO_X on a peak day and an annual basis may result in maximum ambient air concentrations that exceed the South Coast Air Quality Management District's significance thresholds.

As discussed above, potential localized 24-hour PM_{10} impacts could encompass sensitive land uses within the following areas: (1) West of the Project Site to approximately 150 east of Albany Street between 12th Street and Olympic Boulevard; (2) West of the Project Site east of Oak Street between Venice Boulevard and 14th Street; (3) South of the Project Site on the north side of I-10 along Wright Street; (4) South of the Project Site to

approximately 150 feet south of 17th Street between Georgia Street and Figueroa Street; and (5) East of the Project Site on the north side of I-10 approximately 130 feet south Venice Boulevard between Hope Street and Grand Avenue. The predominant source of PM_{10} impacts is from Project-related traffic accessing the freeway system. The concentrations presented in Table IV.F.1-9 and Table IV.F.1-10 reflect the worst-case 24 hourly meteorological conditions during that period. The impacts shown in Table IV.F.1-10 only occur if worst case meteorological conditions coincide with a capacity event at the Event Center and a peak event at the Convention Center. Based on SCAQMD data, meteorological conditions between approximately 0.5 and 5 percent of the days in a year. Capacity events occur at the Event Center approximately 10 percent of the year. The same is true with regard to peak activity levels at the Convention Center. So while significant impacts are forecasted to occur, the frequency when all three of these events coincide on the same day, which is required to yield the impacts shown in Table IV.F.1-10, may not occur at all given the probability of each event to occur individually, much less all three at the same time. In addition, the Proposed Project would also implement project design features to minimize PM_{10} emissions. Further, with regard to impacts on school facilities, the time periods during which the impacts described above would occur outside normal school hours (i.e., weekday evening pre-event hour and weekends).

The NO_2 exceedances are primarily a function of very high ambient background concentrations as reflected in the fact that the background annual NO_2 concentration represents approximately 98.5 percent of the federal standard and the background 1-hour NO_2 concentration represents approximately 77 percent of the national standard and 67 percent of the state standard. Assuming that the maximum concentrations for the Project Event Day and Future No Project Event Day occur within the same hour, then the maximum hourly incremental change as a result of the Project would represent an increase above the national and state standards of approximately 41 percent and 10 percent, respectively. The maximum annual incremental change as a result of the Project would represent an increase above the national standard of approximately 8 percent. As such, the Project would have a limited effect on long-term ambient concentrations. The 2007 Air Quality Management Plan projects that nitrogen oxide emissions in the South Coast Air Basin will decrease by approximately 41 percent by Year 2023, which suggests that the NO_2 background concentration and the Project contribution (e.g., vehicle emissions of NO_2 are anticipated to decrease in subsequent years) will also substantially decrease over time.[29] Given the Project's comparatively minor effect on ambient concentrations and given the 2007 Air Quality Management Plan's projections regarding the likely substantial

[29] *SCAMD, 2007 Air Quality Management Plan, Appendix III. Annual Average Emissions by Major Source Category shows a decrease of 41 percent from 2008 (853.7 tons per day) to 2023 (506.35 tons per day), www.aqmd.gov/aqmp/07aqmp/index.html.*

decrease in ambient nitrogen dioxide concentrations in subsequent years, an analysis of operational emissions that took the likely decrease in NO_2 concentrations into account would be expected to demonstrate that Project operations would not cause an exceedance of ambient air quality concentrations. Further, as detailed below, the Project is an in-fill development that would advance many of the long-term planning and transportation goals and strategies of the 2007 Air Quality Management Plan. The Project would also implement project design features to minimize NO_2 emissions. As an example, emission factors for proposed boilers are based on SCAQMD emission factors provided in the 1993 SCAQMD CEQA Handbook. Best Available Control Technology required under SCAQMD Regulation XII, New Source Review, would likely result in the use of low-NOx boilers with flue gas recirculation and would substantially reduce NO_X emissions from this on-site source. For these reasons, the Project is consistent with the long-term planning goals of the 2007 Air Quality Management Plan, as a whole.

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 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 Proposed 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 2007 AQMP, two sources of data form the basis for the projections of air pollutant emissions: the City of Los Angeles General Plan and SCAG's *Regional Transportation Plan (RTP)*. On May 8, 2008, SCAG adopted the 2008 Regional Transportation Plan which is not yet incorporated into the 2007 AQMP. The 2012 AQMP currently in process will include the 2012 Regional Transportation Plan/Sustainable Communities Strategy. The 2008 RTP provides socioeconomic forecast projections of regional population growth. The Proposed Project is consistent with the types, intensity and patterns of land use envisioned for the site vicinity in the 2008 RTP. 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 2008 RTP data will be used in this analysis. Please refer to Section IV.G, Land Use, of this Draft EIR for additional information regarding land use consistency.

The 2008 RTP projects that employment in the Los Angeles subregion will grow by about 48,011 jobs between 2010 through 2017. The Proposed Project is projected to result in a net increase of approximately 3,600 direct, indirect and induced jobs, or approximately 7.5 percent of the total job growth projected for the subregion. Such levels of employment growth are within the employment forecast for the subregion as adopted by SCAG. As these or similar projections were incorporated into the 2007 AQMP, it is anticipated that the Proposed Project would be consistent with the projections in the AQMP.

- Does the project implement all feasible air quality mitigation measures?

Implementation of all feasible mitigation measures is required to reduce air quality impacts to the extent feasible. The Proposed Project would incorporate feasible control measures identified by the SCAQMD, as summarized below. The Proposed Project includes project design features, as described above, that serve to substantially reduce construction and operational emissions from the Proposed Project. The Proposed Project also includes other project design features that reduce air quality impacts through a reduction in energy consumption and vehicle trips (e.g., water conservation, wastewater reduction, solid waste reduction, electricity consumption reduction, and transportation demand management features as set forth in Section IV.K.1, Utilities—Water; Section IV.K.2, Utilities—Wastewater; Section IV.K.3, Utilities—Solid Waste; Section IV.K.4, Utilities—Electricity; and Section IV.B, Transportation, respectively). As such, the Proposed Project meets this AQMP consistency criterion since all feasible mitigation measures would be implemented.

- To what extent is project development consistent with the land use policies set forth in the AQMP?

The Proposed Project would serve to implement a number of land use policies of the City of Los Angeles and SCAG (see Section IV.A, Land Use, of this Draft EIR). With regard to land use developments, such as the Proposed Project, air quality policies focus on the reduction of vehicle trips and vehicle miles traveled. The Project Site is located on a previously developed urban site in Downtown Los Angeles with substantial existing infrastructure in place. This location provides convenient pedestrian access to the Metro Rail Blue Line Pico Station and the Metro Rail Red Line 7th/Metro Center Station. The site is also well served by bus service. As a result, the Proposed Project contributes to a reduction in air quality emissions via a reduction in vehicle trips and vehicle miles traveled.

The Proposed Project could reduce motor vehicle trips that could otherwise occur if the facility is located somewhere distant from public transportation and as a result, the Proposed Project implements the SCAQMD's objective of reducing vehicle miles traveled and the related vehicular air emissions, the Proposed Project would be 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 Basin. While development of the Proposed 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 the significant emissions of PM_{10}, $PM_{2.5}$, and 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 Proposed 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.

(7) City of Los Angeles Policies

The City of Los Angeles General Plan was prepared in response to state law requiring that each city and county adopt a long-term comprehensive general plan. This plan must be integrated, internally consistent, and 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 about 465 square miles.

The 1992 revision of 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 Proposed 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 native transit and congestion management measures for discretionary projects.

The above goals, objectives, and policies reflect the necessity to reduce the reliance on single occupant vehicles and recognizing the relationship between land use, transportation, and air quality (reducing vehicle trips and vehicle miles travelled). The key

elements of the Proposed Project's transportation strategy that would reduce air quality impacts are summarized below.

- Encourage and Facilitate the Use of Transit: The location of the Proposed Project provides a unique opportunity for the significant use of transit, particularly high capacity rail transit, to access the Proposed Project. The use of transit would be promoted as the central focus of the transportation strategy for the Proposed Project.

- Minimize Automobile Trips: The Proposed Project would pursue policies and programs to reduce auto trips, through SB 292, promoting and encouraging increased transit use, auto vehicle occupancies, and walking and bicycling. The Proposed Project would implement streetscape improvements that would enhance the pedestrian environment at the Project Site and build on the existing LASED Streetscape Plan to develop guidelines for streetscape improvements on streets leading to and from the Project Site. The Proposed Project would also encourage the use of bicycling through the provision of bicycle parking and bicycle valets, and coordinating with the current plans for a Bike Station at or in the vicinity of the Project Site, as well as the concept proposal in the current Figueroa Corridor Study for adding bike lanes on Figueroa Street. Additionally, the Proposed Project would include enhancements to the Blue Line Pico Station in an effort to increase capacity and encourage increased ridership.

- The Extensive Use of Information Systems to Inform Patrons of Transportation Options and Preferred Transportation Methods and Operations: the Proposed Project would extensively use information systems to inform patrons, similar to that currently done for STAPLES Center and L.A. LIVE, to inform patrons of all transportation options. This would include the use of traditional methods such as print and broadcast media, as well as the latest digital distribution technology including methods in real time to mobile personal devices (e.g., smart phones, and in-car navigation systems) where feasible.

The Proposed Project meets or exceeds all applicable policies of the City of Los Angeles Air Quality Element. As discussed above, development of the Project would implement project features that would reduce vehicular trips, reduce vehicle miles traveled, and encourage use of alternative modes of transportation. Overall, the central location of the Project and its proximity to existing transportation infrastructure, mass transit options, and the downtown area would result in a reduction of vehicle miles traveled and vehicle trips. As a result, the Project would be consistent with the City of Los Angeles Air Quality Element.

The City of Los Angeles' General Plan Framework Element (Housing Chapter) also includes the following policy related to air quality and potential adverse health effects:

Policy 4.1.9—Whenever possible, assure adequate health-based buffer zones between new residential and emitting industries.

The Proposed Project would not site new residences near existing emitting industries that may pose significant adverse health effects, and therefore the Project would be consistent with this policy.

4. Cumulative Impacts

a. Construction

With respect to the Proposed Project's construction-period air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to Federal CAA mandates. As such, the Proposed Project would comply with SCAQMD Rule 403 requirements, and implement all feasible mitigation measures. In addition, the Proposed 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, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects Basin-wide.

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. Construction-related daily mass emissions at the Project Site would exceed the SCAQMD's significance threshold for CO, NO_X, and VOC. Consequently, the Project would have a cumulative impact due to construction-related regional CO, VOC and NO_X emissions. In terms of localized air quality impacts, construction of the project would have a cumulative impact due to NO_X, PM_{10}, and $PM_{2.5}$ emissions. Other construction projects in the vicinity of the Project Site could also contribute emissions that would cumulatively increase these concentrations. As such, cumulative impacts to air quality during Proposed Project construction would also be significant and unavoidable.

Similar to criteria pollutants, according to the SCAQMD, individual construction projects that exceed the SCAQMD's recommended significance thresholds for project-specific impacts would also result in a cumulatively considerable impact with regards to TACs. As discussed earlier, the Proposed Project's greatest potential for TAC emissions would involve 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. Construction activities at each related project would not result in a long-term (i.e., 70 years) substantial 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 meaningful to evaluate long-term cancer impacts from construction activities which occur over a relatively short duration. Nonetheless, a HRA was prepared for the Proposed Project which concludes that the Proposed Project's TAC emission impacts during construction would be less than significant. As such, cumulative TAC emission impacts during construction would not be cumulatively considerable and are therefore concluded to be less than significant.

Also similar to the Proposed Project, potential sources that may emit odors during construction activities at each related project would include the use of architectural coatings and solvents. SCAQMD Rule 1113 limits the amount of volatile organic compounds from architectural coatings and solvents. Via mandatory compliance with SCAQMD Rules, it is anticipated that construction activities or materials used in the construction of the related projects would not create objectionable odors. Thus, odor impacts from the related projects are anticipated to be less than significant individually, as well as cumulatively in conjunction with the Proposed Project.

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. Regional operational emissions from the Proposed Project would exceed the SCAQMD's thresholds for VOC, NO_X, CO, PM_{10}, and $PM_{2.5.}$ Localized operational emissions from the Proposed Project would exceed the SCAQMD's threshold for PM_{10} and state and federal 1-hour and federal annual NO_2 standards. Therefore, the emissions of non-attainment pollutants and precursors generated by Project operation in excess of the SCAQMD project-level thresholds would also constitute a significant cumulative impact.

With respect to TAC emissions, neither the Proposed Project nor any of the related projects (which are largely residential, retail/commercial, and light industrial uses), would represent a substantial source of TAC emissions, which are typically associated with large-scale industrial, manufacturing, and transportation hub facilities.

Based on recommended screening level siting distances for TAC sources, as set forth in the California Air Resources Board's Land Use Guidelines, the Proposed Project

and related projects would not result in a cumulative impact requiring further evaluation. However, the Proposed Project and each of the related projects would likely generate minimal TAC emissions related to the use of consumer products, landscape maintenance activities, among other things. Pursuant to California Assembly Bill 1807, which directs the CARB to identify substances as TAC and adopt airborne toxic control measures (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 Proposed Project would not result in any sources of TACs that have been identified by Land Use Guidelines, and thus, would not contribute to a cumulative impact.

c. Odors

With respect to potential odor impacts, neither the Proposed Project nor any of the related projects (which are primarily residential, retail, and office uses) have a high potential to generate odor impacts.[30] Furthermore, any related project that may have a potential to generate objectionable odors would be required by SCAQMD Rule 402 (Nuisance) to implement BACT to limit potential objectionable odor impacts to a less than significant level. Thus, potential odor impacts from related projects are anticipated to be less than significant individually and cumulatively.

d. Consistency with Air Quality Policies

The Proposed Project would not jeopardize the attainment of air quality standards in the 2007 Air Quality Management Plan for the South Coast Air Basin and the Los Angeles County portion of the South Coast Air Basin. As such, the Proposed Project would not have a cumulatively considerable contribution to a potential conflict with or obstruction of the implementation of all applicable air quality plans.

[30] *Ibid.*

5. Project Design Features and Mitigation Measures

a. Project Design Features

Project Design Feature F.1-1: The Project would comply with SCAQMD Rule 403 regarding fugitive dust control through implementation of 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.
- 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 would be covered or would maintain at least 6 inches of freeboard.
- Suspend earthmoving operations or implement additional watering to meet Rule 403 criteria if wind gusts exceed 25 mph.
- An information sign shall be posted at the entrance to each 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.

b. Mitigation Measures

Project development would comply with all applicable SCAQMD rules and regulations and would implement feasible mitigation measures for the control of Project-generated air pollutants. The Project would also advance the SCAQMD's goals of reducing vehicle miles traveled and vehicle trips by placing new jobs in an existing urban center near downtown Los Angeles, with easy access to existing mass transit. The Proposed Project would incorporate sustainability as one of key design and operation criteria. In so doing, the Proposed Project would meet all aspects of the City of Los Angeles Green Building Code. The Event Center would be designed to achieve LEED certification. The New Hall would be designed with the intent of achieving a LEED Gold certification. In addition, the applicant is investigating the opportunity for on-site generation of clean and renewable energy for the Proposed Project. The Proposed Project would also achieve "Best in the NFL" in terms of vehicle trip ratio of the total annual number of private automobiles arriving at the Event Center to total annual number of spectators, as well as carbon neutrality with respect to private automobiles traveling to the Event Center.

In addition, the project design features and mitigation measures set forth in Section IV.B.2, Climate Change, of this Draft EIR, which reduce energy use also serve to reduce the Project's air pollutant emissions and mitigation measures set forth in Section IV.B, Transportation, of this Draft EIR, that reduce vehicle trips also serve to reduce the Project's air pollution emissions.

(1) Construction

The following mitigation measures set forth a program of air pollution control strategies designed to reduce the Proposed Project's air quality impacts to the extent feasible during construction.

Mitigation Measure F.1-1: 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 construction activities for the Project. 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 onsite at the time of mobilization of each applicable unit of equipment. Off-road diesel-powered equipment that will be used an aggregate of 40 or more hours during any portion of the construction activities for the Project shall meet the Tier 3 standards and off-road equipment greater than 300 horsepower shall be equipped with diesel particulate filters. Beginning in January 2015, the requirement shall increase to Tier 4 equipment where commercially available.

Mitigation Measure F.1-2: All construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.

Mitigation Measure F.1-3: Contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues will have their engines turned off after 5 minutes when not in use, to reduce vehicle emissions.

Mitigation Measure F.1-4: Emission generating construction activities shall be phased and scheduled to avoid emissions peaks and discontinued during second-stage smog alerts.

Mitigation Measure F.1-5: To the extent practical, electric powered construction equipment shall utilize electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.

Mitigation Measure F.1-6: Low- and non-VOC containing paints, sealants, adhesives, solvents, asphalt primer, and architectural coatings (where used), or pre-fabricated architectural panels shall be used in the construction of the Project to reduce VOC emissions to the maximum extent practicable.

Mitigation Measure F.1-7: Construction equipment shall incorporate, where commercially available, emissions-saving technology such as hybrid drives and specific fuel economy standards upon promulgation (e.g., CAFÉ Standards).

Mitigation Measure F.1-8: Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the extent practicable.

(2) Operation

The mitigation measure below is proposed to minimize emissions associated with deliveries to the Project Site. As noted above, the Proposed Project also incorporates a number of design features that would minimize emissions associated with operation of the Proposed Project. Among these features is a Transportation Management Plan (TMP) that would encourage the maximum use of transit and other non-auto modes, use of existing parking resources in the downtown area, and use of traffic management to maximize the capacity of existing transportation facilities during events. The TMP is described in detail in Section IV.B.1, Transportation. In addition, as discussed above and in Section I.V.2, Air Quality—Climate Change, per SB 292, the Event Center must achieve and maintain carbon neutrality by reducing to zero the net emissions of greenhouse gases from private automobile trips to and from Spectator Events at the Event Center through: (1) implementation of the TMP; (2) investment in local community projects that reduce greenhouse gas emissions; and (3) purchase of carbon offsets. Programs that would reduce GHG emissions would also generally reduce emissions of criteria air pollutants.

Mitigation Measure F.1-9: The Applicant shall work with the contractor to schedule as many deliveries as practical during off-peak traffic periods to encourage the reduction of trips during the most congested periods.

6. Level of Significance After Mitigation

a. Construction

Implementation of the mitigation measures and project design features described above would reduce construction emissions for all pollutants. However, as shown in Table IV.F.1-15 on page IV.F.1-75, the Proposed Project would remain in exceedance of the SCAQMD regional significance thresholds for VOC, CO and NO_X during the most

Table IV.F.1-15
Mitigated Proposed Project—Estimate of Construction Emissions[a]
(pounds per day)

Regional Emissions	VOC	CO	NO_X	SO_X	PM_{10}[b]	$PM_{2.5}$[b]
Bond Street Garage (Sept. 2012–Jun. 2013)						
Demolition	1	23	23	<1	2	1
Mass Excavation	1	27	19	<1	8	2
Foundations	3	54	30	<1	3	2
Concrete/Steel/Precast Frame	3	50	35	<1	3	2
Site Work/Landscaping	1	25	16	<1	2	1
Interior/Exterior	15	26	10	<1	1	1
Maximum Bond Street Daily Emissions[c]	*19*	*76*	*45*	<1	*10*	*4*
New Hall (Sept. 2012–Feb. 2013)						
Demolition	3	60	57	<1	4	2
Mass Excavation	3	41	46	<1	15	4
Caisson Phase	3	57	44	<1	4	2
Concrete/Steel/Precast Frame	5	80	50	<1	5	3
Site Work/Landscaping	2	50	28	<1	3	2
Interior/Exterior	49	290	98	<1	12	8
Maximum New Hall Daily Emissions[d]	*58*	*427*	*192*	*1*	*22*	*13*
L.A. Live Way Garage (Jul. 2013–Sept. 2014)						
Demolition	3	59	61	<1	9	3
Mass Excavation	8	69	120	<1	30	9
Foundations	3	54	28	<1	3	2
Concrete/Steel/Precast Frame	4	68	49	<1	4	2
Site Work/Landscaping	1	33	21	<1	2	1
Interior/Exterior	39	41	19	<1	2	1
Maximum L.A. Live Way Garage Daily Emissions[e]	*43*	*129*	*181*	<1	*39*	*12*
Event Center (Dec 2013–Aug. 2016)						
Demolition	6	69	90	<1	14	5
Mass Excavation	12	103	177	<1	51	14
Caisson Phase	3	47	45	<1	4	2
Shoring Phase	2	38	30	<1	2	1
Concrete/Steel/Precast Frame	18	337	85	1	14	6
Site Work/Landscaping	2	44	22	<1	2	1
Interior/Exterior	30	459	103	<1	17	9
Playing Field	2	50	29	<1	3	2
Maximum Event Center Daily Emissions[f]	*52*	*881*	*338*	1	*71*	*23*

Table IV.F.1-15 (Continued)
Mitigated Proposed Project—Estimate of Construction Emissions[a]
(pounds per day)

Regional Emissions	VOC	CO	NO_X	SO_X	PM_{10}[b]	$PM_{2.5}$[b]
Maximum Overlapping Construction Emissions[g]	**77**	**881**	**406**	**1**	**77**	**27**
SCAQMD Daily Significance Thresholds	**75**	**550**	**100**	**150**	**150**	**55**
Over/(Under)	**2**	**331**	**306**	**(149)**	**(73)**	**(28)**
Exceed Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the calculation worksheets that are presented in Appendix M.*

[b] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

[c] *Maximum overlapping VOC, and CO, and NO_X emissions occur when Concrete/Steel/Precast Frame and Interior/Exterior phases overlap. All other pollutant maximum overlapping emissions occur when Demolition and Mass Excavation phases overlap.*

[d] *Maximum overlapping emissions occur when Caisson, Concrete/Steel/Precast Frame and Interior/Exterior phases overlap.*

[e] *Maximum overlapping VOC emissions occur when Concrete/Steel/Precast Frame and Interior/Exterior phases all overlap. All other pollutant maximum overlapping emissions occur when Demolition and Mass Excavation phases overlap.*

[f] *Maximum overlapping VOC, and CO emissions occur when Caisson, Shoring, Concrete/Steel/Precast Frame, and Interior/Exterior phases all overlap. Maximum overlapping NO_X, PM_{10}, and $PM_{2.5}$ emissions occur when Mass Excavation, Caisson, Shoring, and Concrete/Steel/Precast Frame phases all overlap.*

[g] *Maximum overlapping CO emissions occur when Event Center Caisson, Shoring, Concrete/Steel/Precast Frame, and Interior/Exterior phases overlap. All other pollutant maximum overlapping emissions occur when L.A. Live Way Garage Concrete/Steel/Precast Frame and Interior/Exterior phases and Event Center Mass Excavation, Caisson, Shoring, and Concrete/Steel/Precast Frame phases overlap.*

Source: Matrix Environmental, 2012.

intense construction period. As such, project construction would continue to result in a significant regional impact even with incorporation of all feasible mitigation measures.

Implementation of the mitigation measures and project design features described above would reduce localized PM_{10}, $PM_{2.5}$, and NO_X emissions by an average of 46, 50, and 54 percent, respectively. Even with incorporation of mitigation measures, as shown in Table IV.F.1-16 on page IV.F.1-77, the Proposed Project would remain in exceedance of the SCAQMD LST threshold for NO_2.

Therefore, the localized effects from the on-site construction emissions of NO_X were analyzed using the AERMOD dispersion model. The results of the dispersion modeling are presented in Table IV.F.1-17 on page IV.F.1-79.

Table IV.F.1-16
Mitigated Proposed Project—Estimate of Localized Construction Emissions
(pounds per day)

Local Emissions	NO_X	CO	PM_{10}[a]	$PM_{2.5}$[a]
Bond Street Garage				
Demolition	16	17	1	1
Mass Excavation	15	17	7	2
Foundations	20	29	2	1
Concrete/Steel/Precast Frame	18	23	1	1
Site Work/Landscaping	12	19	1	1
Interior/Exterior	8	13	1	1
Bond Street Maximum On-Site Emissions[b]	**31**	**36**	**8**	**3**
SCAQMD Localized Significance Thresholds[c]	**37**	**1,806**	**41**	**18**
Exceed Threshold?	**No**	**No**	**No**	**No**
New Hall				
Demolition	49	50	3	2
Mass Excavation	23	28	12	3
Caisson Phase	29	32	2	1
Concrete/Steel/Precast Frame	26	37	2	2
Site Work/Landscaping	21	31	2	2
Interior/Exterior	68	102	6	6
New Hall Maximum On-Site Emissions[d]	**123**	**172**	**15**	**9**
SCAQMD Localized Significance Thresholds[e]	**51**	**3,061**	**67**	**31**
Exceed Threshold?	**Yes**	**No**	**No**	**No**
L.A. Live Way Garage				
Demolition	45	47	7	2
Mass Excavation	30	35	19	5
Foundations	19	28	1	1
Concrete/Steel/Precast Frame	28	38	2	1
Site Work/Landscaping	16	24	1	1
Interior/Exterior	16	24	1	1
L.A. Live Way Garage Maximum On-Site Emissions[f]	**75**	**83**	**25**	**7**
SCAQMD Localized Significance Thresholds[g]	**51**	**1,901**	**39**	**11**
Exceed Threshold?	**Yes**	**No**	**No**	**No**
Event Center				
Demolition	43	46	7	2
Mass Excavation	49	51	33	8
Caisson Phase	26	33	1	1
Shoring Phase	22	28	1	1
Concrete/Steel/Precast Frame	30	43	2	2

Table IV.F.1-16 (Continued)
Mitigated Proposed Project—Estimate of Localized Construction Emissions
(pounds per day)

Local Emissions	NO_X	CO	PM_{10}[a]	$PM_{2.5}$[a]
Site Work/Landscaping	18	33	1	1
Interior/Exterior	67	113	6	5
Playing Field	23	41	2	2
Event Center Maximum On-Site Emissions[h]	**145**	**216**	**41**	**12**
SCAQMD Localized Significance Thresholds[i]	**68**	**3,281**	**66**	**23**
Exceed Threshold?	**Yes**	**No**	**No**	**No**
Proposed Project Maximum Overlapping Localized Emissions[j]	**179**	**246**	**42**	**14**
SCAQMD Localized Significance Thresholds[k]	**66**	**2,651**	**53**	**15**
Exceed Threshold?	**Yes**	**No**	**No**	**No**

[a] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

[b] *Maximum on-site emissions for CO occur when Concrete/Steel/Precast Frame and Interior/Exterior phases overlap. Maximums for all other pollutants occur when Demolition and Mass Excavation overlap.*

[c] *SCAQMD LSTs based on SRA 1, 1 acre active site area, and 122 meter (400 feet) receptor distance.*

[d] *Maximum on-site emissions for CO, NO_X, and $PM_{2.5}$ occur when Caisson, Concrete/Steel/Precast Frame and Interior/Exterior phases overlap. Maximum PM_{10} emissions occur when Demolition and Mass Excavation overlap.*

[e] *SCAQMD LSTs based on SRA1, 2 acre active site area, and 168 meter (550 feet) receptor distance.*

[f] *Maximum on-site emissions all pollutants occur when Demolition and Mass Grading overlap.*

[g] *SCAQMD LSTs based on SRA 1, 3 acre active site area, and 76 meter (250 feet) receptor distance.*

[h] *Maximum on-site CO and NO_X Emissions occur when Caisson, Shoring, Concrete/Steel/Precast Frame, and Interior/Exterior phases overlap. Maximum on-site PM_{10} emissions occur when Demolition and Mass Excavation phases overlap. Maximum on-site $PM_{2.5}$ emissions occur when Mass Excavation, Caisson, Shoring, and Concrete/Steel/Precast Frame phases all overlap.*

[i] *SCAQMD LSTs based on SRA 1, 5 acre active site area, and 110 meter (360 feet) receptor distance.*

[j] *Maximum on-site emissions between overlapping sites occur for CO and NO_X when New Hall Site Work/Landscaping, New Hall Interior/Exterior, L.A. Live Way Garage Foundations, L.A. Live Way Garage Concrete/Steel/Precast Frame, and Event Center Demolition overlap. Maximum emissions for PM_{10} occur when L.A. Live Way Garage Concrete/Steel/Precast Frame and Event Center Demolition and Mass Excavation phases overlap. Maximum emissions of $PM_{2.5}$ occur when L.A. Live Way Garage Concrete/Steel/Precast Frame, L.A. Live Way Parking Garage Interior/Exterior, and Event Center Mass Excavation, Caisson, Shoring, and Concrete/Steel/Precast phases all overlap*

[k] *SCAQMD LSTs based on SRA 1, 5 acre active site area, and 76 meter (250 feet) receptor distance. Source: Matrix Environmental, 2011.*

Source: Matrix Environmental, 2012.

Table IV.F.1-17
Mitigated Proposed Project—Maximum Ambient Construction NO_2 Pollutant Impacts

Pollutant	Pico Union Residences	Toberman Park	Carver Apartments	Mohan High School	Grand/ Hope Park (FIDM)	Maximum Residential
State NO_2 (1-Hr Concentration) (µg/m3)						
Bond Street Garage	11.0	3.1	3.0	3.9	7.1	11.0
New Hall	19.5	8.5	8.9	11.9	23.3	19.5
L.A. Live Way Garage	20.2	8.2	3.7	4.9	23.8	20.2
Event Center	27.3	8.7	6.5	10.4	56.0	38.8
Maximum Overlap)	26.1	12.7	10.1	13.3	53.5	26.1
Maximum Increment	27.3	12.7	10.1	13.3	56.0	38.8
CAAQS Background	225.6	225.6	225.6	225.6	225.6	225.6
CAAQS Background + Increment	252.9	238.3	235.7	238.9	281.6	264.4
SCAQMD Threshold	339.0	339.0	339.0	339.0	339.0	339.0
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**
National NO_2 (1-Hr Concentration) (µg/m^3)						
Bond Street Garage	8.0	2.1	1.3	1.9	0.7	8.0
New Hall	11.1	5.5	5.7	9.9	4.0	15.1
L.A. Live Way Garage	12.1	5.7	2.2	2.6	1.8	12.1
Event Center	17.4	6.0	5.0	8.4	5.6	32.5
Maximum Overlap	15.4	9.1	7.0	11.0	5.3	18.4
Maximum Increment	17.4	9.1	7.0	11.0	5.6	32.5
NAAQS Background	142.3	142.3	142.3	142.3	142.3	142.3
NAAQS Background + Increment	159.7	151.3	149.3	153.2	147.8	174.8
SCAQMD Threshold	188.0	188.0	188.0	188.0	188.0	188.0
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**
NO_2 (Annual Concentration) (µg/m^3)						
Bond Street Garage	0.158	0.017	0.011	0.017	0.017	0.158
New Hall	0.180	0.051	0.039	0.079	0.107	0.349
L.A. Live Way Garage	0.444	0.034	0.017	0.023	0.039	0.444
Event Center	0.388	0.045	0.034	0.056	0.129	1.266
Maximum Overlap)	0.506	0.068	0.051	0.090	0.141	0.759
Maximum Increment	0.506	0.068	0.051	0.090	0.141	1.266
Background	56.2	56.2	56.2	56.2	56.2	56.2
Background + Increment	56.7	56.3	56.3	56.3	56.4	57.5
SCAQMD Threshold (CAAQS)	57.0	57.0	57.0	57.0	57.0	57.0
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**Yes**

Source: Matrix Environmental, 2012.

As shown in Table IV.F.1-17, the maximum hourly NO_2 incremental concentrations of 38.8 µg/m^3 and 98th percentile hourly incremental threshold concentration of 32.5 µg/m^3

would not exceed the state 1-hour threshold or federal 1-hour threshold at any of the identified sensitive receptors, respectively. However, the annual NO_2 incremental concentration of 1.3 µg/m^3 would exceed the federal threshold. This impact would occur at the Ritz Residences and would be representative of pollutant concentrations for either residential or commercial land uses in the immediate vicinity of the Project Site. Although hourly NO_2 concentrations would not exceed the state and federal thresholds at sensitive receptors, the area of impact for non-sensitive receptors would encompass areas immediately north of the Project Site between L.A. Live Way and Figueroa Street. Potential localized state 1-hour NO_2 impacts above the incremental threshold of 113 µg/m^3 on the peak construction day could extend northward approximately 150 feet and encompass portions of the existing parking structure on the corner of Chick Hearn Court and L.A. Live Way and a portion of the Nokia Theatre. Potential localized federal 1-hour NO_2 impacts above the incremental threshold of 46 µg/m^3 on the peak construction day could extend northward approximately 280 feet and also encompass the existing parking structure on the corner of Chick Hearn Court and L.A. Live Way and the Nokia Theatre. Potential localized federal annual NO_2 impacts above the incremental threshold of 0.8 µg/m^3 during the peak year of construction could extend northward to Olympic Blvd and would also encompass the Ritz Residences. All land uses (e.g., commercial, retail, office, industrial, and residential) within these areas could potentially be impacted by localized hourly NO_2 concentrations in excess of the state and federal standards during construction. This impact would be temporary in nature, lasting only for the construction period, and would not have a long-term impact on the region's ability to meet state and federal air quality standards.

Therefore, with respect to localized emissions from construction activities, NO_2 impacts would be temporary but significant and unavoidable. Detailed modeling results are provided in Appendix M of this Draft EIR. Cumulative impacts associated with construction of the Project described above would also remain significant.

No notable impacts related to TAC emissions during construction are anticipated to occur for the Proposed Project. Please note that the mitigation measures provided above would further reduce diesel exhaust emissions associated with on-site heavy equipment and haul trucks during the construction period. As detailed in Appendix M, the maximum incremental increase in off-site individual adult cancer risk would be reduced to 1.4 in a million over the duration of construction and an excess cancer burden of less than 0.1, where the maximum impact occurs at residential uses north of the Project Site. The cancer risk at this receptor for child exposure is reduced to 2.4 in a million with an excess cancer burden less than 0.1. The chronic hazard index would be reduced to less than 0.1 and 0.2 for adult and child exposure, respectively. As such, potential impacts would be less than significant.

The Proposed Project is not anticipated to generate a substantial amount of objectionable odor emissions during construction. Via mandatory compliance with SCAQMD Rules, no construction activities or materials are proposed that would create objectionable odors. As such, potential impacts would be less than significant.

b. Operation

As discussed above, Project development would comply with all applicable SCAQMD rules and regulations and would implement feasible mitigation measures and design features for the control of Proposed Project-generated air pollutants. The Project would also advance the SCAQMD's goals of reducing vehicle miles traveled and vehicle trips by placing new jobs in an existing urban center near downtown Los Angeles, with easy access to existing mass transit. The Proposed Project would incorporate sustainability as one of its key design and operations criteria. In so doing, the Proposed Project would meet all aspects of the City of Los Angeles Green Building Code. The New Hall would be designed with the intent of achieving a LEED Gold certification, whereas the Event Center would be designed to achieve LEED certification. The Proposed Project would also achieve "Best in the NFL" in terms of vehicle trip ratio of the total annual number of private automobiles arriving at the Event Center to total annual number of spectators, as well as carbon neutrality with respect to private automobiles traveling to the Event Center.

In addition, the project design features and mitigation measures set forth in Section IV.B.2, Climate Change, of this Draft EIR, which reduce energy use also serve to reduce the Proposed Project's air pollutant emissions and mitigation measures set forth in Section IV.B, Transportation, of this Draft EIR, that reduce vehicle trips also serve to reduce the Project's air pollution emissions. Although the Project would incorporate these numerous project design features to reduce operational emissions, regional operational emissions would still exceed the SCAQMD daily emission threshold for regional NO_X, VOC, PM_{10} $PM_{2.5}$, and CO after implementation of feasible mitigation measures. Therefore, operation of the Proposed Project would have a significant and unavoidable impact on regional air quality. Cumulative operational air quality impacts would also remain significant.

Localized operational emissions would also still exceed their respective state and federal thresholds. Therefore, with respect to localized emissions from operational activities, PM_{10} and NO_X impacts would be significant and unavoidable. The exceedance of NO_2 is primarily a function of very high ambient background concentrations as reflected in the fact that the background annual NO_2 concentration represents approximately 98.5 percent of the federal standard and the background 1-hour NO_2 concentration represents approximately 77 percent of the national standard and 67 percent of the state standard. Assuming that the maximum concentrations for the Project Event Day and Future No Project Event Day scenarios occur within the same hour, then the maximum

hourly incremental change as a result of the Project would represent an increase above the national and state standards of approximately 41 percent and 10 percent, respectively. The maximum annual incremental change as a result of the Project would represent an increase above the national standard of approximately 8 percent. The 2007 Air Quality Management Plan projects that nitrogen oxide emissions in the South Coast Air Basin will decrease by approximately 41 percent by Year 2023, which suggests that the NO_2 background concentration and the Project contribution (e.g. vehicle emissions of NO_2 are anticipated to decrease in subsequent years) will also substantially decrease over time.[31] Given the Project's comparatively minor effect on ambient concentrations and given the 2007 Air Quality Management Plan's projections regarding the likely substantial decrease in ambient nitrogen dioxide concentrations in subsequent years, an analysis of operational emissions that took the likely decrease in NO_2 concentrations into account would be expected to demonstrate that Project operations would not cause an exceedance of ambient air quality concentrations. Further, as detailed below, the Project is an in-fill development that would advance many of the long-term planning and transportation goals and strategies of the 2007 Air Quality Management Plan. The Project would also implement project design features to minimize NO_X emissions. As an example, emission factors for proposed boilers are based on SCAQMD emission factors provided in the 1993 SCAQMD CEQA Handbook. Best Available Control Technology required under SCAQMD Regulation XII, New Source Review, would likely result in the use of low-NOx boilers with flue gas recirculation and would substantially reduce NO_X emissions from this on-site source.

For these reasons, the Project is consistent with the long-term planning goals of the 2007 Air Quality Management Plan, as a whole. Detailed modeling results are provided in Appendix M of this Draft EIR. No significant impacts related to local CO concentrations would occur for the Proposed Project. Project development would be consistent with the air quality policies set forth in the SCAQMD's AQMP and the City of Los Angeles General Plan Air Quality Element, resulting in an impact that would be less than significant.

As discussed above, during Proposed Project operations significant localized PM_{10} concentration levels would occur in certain areas surrounding the Project Site. While the modeling analysis presented in Table IV.F.1-10 supports this conclusion, these impacts would occur when there is a 72,000 attendee Event Center event, a 90th percentile Convention Center event, and worst case meteorological conditions. As this is likely to occur seldom, if ever, and significant impacts would occur only a limited number of days

[31] *SCAMD, 2007 Air Quality Management Plan, Appendix III. Annual Average Emissions by Major Source Category shows a decrease of 41 percent from 2008 (853.7 tons per day) to 2023 (506.35 tons per day), www.aqmd.gov/aqmp/07aqmp/index.html.*

per year at most and only for a few hours per day, requiring permanent full time mitigation would not be appropriate.

c. Concurrent Construction and Operational Emissions

Portions of the Project Site would be completed and occupied while construction of the later Project components would be ongoing. Therefore, concurrent construction and operational impacts were evaluated. Based on a review of the Project components, it was determined that the maximum concurrent emissions could potentially occur during excavation of Event Center and completion of the New Hall. As summarized in Table IV.F.1-18 on page IV.F.1-84, concurrent construction and operational regional emissions of VOC, NO_X, and CO would exceed SCAQMD regional thresholds. Additionally, concurrent construction and operational localized emissions of NO_X would exceed their respective localized thresholds. Because construction represents approximately 94 percent of the NO_X impact, localized dispersion modeling is expected to yield results similar to those presented in Table IV.F.1-17 on page IV.F.1-79. It is expected that localized emissions will remain significant for the national 1-hour and state annual standards, but that these emissions may be intensified by up to 6 percent over those attributable to Proposed Project construction only. As such, localized emissions that result from concurrent construction and operations would result in a significant and unavoidable impact.

Table IV.F.1-18
Concurrent Operation and Construction Emissions[a]
(pounds per day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Regional Emissions						
Regional Operational Emissions—Event Day						
No Project (2014)—LACC (17,000 attendance)	46	112	329	6	17	7
Proposed Project (2014)—New Hall (19,550 attendance)	53	99	375	3	17	6
Net Regional Operational Emissions	7	(13)	46	(3)	0	0
Regional Construction Emissions						
Proposed Project (Post Completion of New Hall)	77	406	881	1	77	27
Total Proposed Project Regional Overlap	**84**	**393**	**927**	**(2)**	**78**	**27**
SCAQMD Construction Thresholds	75	100	550	150	150	55
Exceed Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**
Regional Operational Emissions—Dark Day						
No Project (2014)—LACC (Dark Day)	52	59	36	2	5	4
Proposed Project (2014)—New Hall (19,550 attendance)	53	99	375	3	17	6
Net Regional Operational Emissions	0	40	339	1	12	2
Regional Construction Emissions						
Proposed Project (Post Completion of New Hall)	77	406	881	1	77	27
Total Proposed Project Regional Overlap	78	446	1,220	**2**	**89**	**29**
SCAQMD Construction Thresholds	75	100	550	150	150	55
Exceed Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**
Localized Emissions						
Localized Operational Emissions—Event Day						
No Project (2014)—LACC (17,000 attendance)	32	24	14	<1	3	1
Proposed Project (2014)—New Hall (19,550 attendance)	37	35	19	<1	3	1
Net Localized Operational Emissions	5	10	5	0	0	0
Localized Construction Emissions						
Proposed Project (Post Completion of New Hall)	46	171	217	1	42	14
Total Proposed Project Localized Overlap	51	181	223	**1**	**42**	**15**
SCAQMD Localized Significance Thresholds[b]	N/A	66	2,651	N/A	53	15
Exceed Threshold?	**N/A**	**Yes**	**No**	**N/A**	**No**	**No**
Localized Operational Emissions—Dark Day						
No Project (2014)—LACC (Dark Day)	52	48	22	1	5	4
Proposed Project (2014)—New Hall (19,550 attendance)	37	35	19	<1	3	1
Net Localized Operational Emissions	(14)	(13)	(3)	(1)	(1)	(2)
Localized Construction Emissions						
Proposed Project (Post Completion of New Hall)	46	171	217	1	42	14
Total Proposed Project Localized Overlap	**32**	**157**	**215**	**<1**	**41**	**12**
SCAQMD Localized Significance Thresholds[b]	N/A	66	2,651	N/A	53	15
Exceed Threshold?	**N/A**	**Yes**	**No**	**N/A**	**No**	**No**

Numbers may not add up exactly due to rounding.

[a] *Worksheets and modeling output files are provided in Appendix M.*

[b] *SCAQMD LSTs based on SRA 1, 5 acre active site area, and 76 meter (250 feet) receptor distance.*

Source: Matrix Environmental, 2012.