3.3 AIR QUALITY

3.3.1 Environmental Setting

Climate, Meteorology, and Geography

The climate in the region is classified as Mediterranean with hot, dry summers and wet winters. The regional climate is primarily influenced by the Pacific High high-pressure system, topography including the Santa Ana Mountain Range, and the moderating effects of the Pacific Ocean.

The Pacific High is a semi-permanent anticyclone that influences the direction of prevailing winds to result in clear skies for most of the year. In the summer, the Pacific High deflects storm systems away from southern California. As winter approaches, the Pacific High weakens and shifts to the south, allowing storm systems and precipitation to pass through the region. As the Pacific High moves south, the upper levels of the atmosphere warm and produce an elevated temperature inversion along the west coast, including San Diego County. The inversion layer traps air pollutants near the surface of the earth by limiting vertical dispersion. Mountain ranges in eastern San Diego County constrain the horizontal movement of air and inhibit the ventilation of air pollutants out of the region. These two factors, combined with the emission sources from over three million people, result in the high pollutant conditions sometimes experienced in San Diego County. Santa Ana winds from the northeast can transport air pollutants, particularly ozone, from the Los Angeles metropolitan area into San Diego County.

The pressure gradient between the Pacific High and an inland low-pressure system produces southwest to west onshore air currents on MCB CPEN for most of the year. Sea breezes usually occur during the daytime and disperse air pollutants toward the interior regions. During the evening hours and colder months of the year, the air currents reverse and land breezes blow offshore.

Air Basins

The proposed project area is located in two air basins: the San Diego Air Basin (SDAB) and the South Coast Air Basin (SCAB). The proposed project would be located primarily (i.e., 95 percent) within the SDAB with a small portion (i.e., 5 percent) within the SCAB. The boundaries of the SDAB align with San Diego County, covering approximately 4,200 square miles. The SCAB covers all of Orange County and non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The northernmost portion of the proposed project alignment would be located in Orange County. The San Diego Air Pollution Control District (SDAPCD) regulates air quality-related activities in the SDAB, and the South Coast Air Quality Management District (SCAQMD) regulates air quality in the SCAB.

Air Pollutant Standards and Definitions

Overview

USEPA has set air pollutant emission standards to protect public health. USEPA has set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and particulate matter. Particulate matter criteria pollutants are classified as either respirable particulate matter less than 10 micrometers in diameter (PM_{10}) or fine particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$). The California Air Resource Board (CARB) has set California Ambient Air Quality Standards (CAAQS) for four pollutants in addition to the six NAAQS criteria pollutants: sulfates, hydrogen sulfide (H_2S), vinyl chloride (C_2H_3Cl), and visibility-reducing particles.

Table 3.3-1 presents the NAAQS and CAAQS for the criteria air pollutants at different averaging periods, and the primary and secondary standards for each. Primary standards are the levels of air quality necessary to protect the public health with an adequate margin of safety. Secondary standards are the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Ozone

Ozone is found in the upper atmosphere (as the ozone layer) as well as at ground level. At ground level, O_3 is considered a pollutant. Ozone forms when O_3 precursors (i.e., reactive organic gases [ROGs], CO, nitrogen oxides [NO_X], volatile organic compounds [VOCs]) react with sunlight in the atmosphere. Sources of these precursors include fuel combustion in vehicles and industrial processes, gasoline vapors, and chemical solvents. Ozone can cause respiratory problems (i.e., chest pain, coughing, throat irritation) and exacerbate existing respiratory problems, such as asthma and bronchitis (USEPA 2016a).

Carbon Monoxide

CO is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest in the winter morning when surface-based inversions trap the pollutant at ground level. CO is emitted directly from internal combustion engines. The primary source of CO in urban areas is from motor vehicles. As such, higher concentrations of CO are found along transportation corridors. Exposure to CO results in reduced oxygen-carrying capacity of the blood (USEPA 2016b). High CO concentrations can result in health risks, particularly for individuals with compromised cardiovascular systems.

Nitrogen Dioxide

NO_2 is formed during combustion of fossil fuels from vehicles and industrial processes. NO_2 is an ozone precursor, which can also cause acid rain and acid snow. Health effects of NO_2 include airway inflammation in healthy people and exacerbation of preexisting asthma (USEPA 2016a).

Table 3.3-1 NAAQS and CAAQS for Criteria Air Pollutants

Pollutant	Averaging Time	CAAQS [a]	NAAQS [b]	
			Primary	Secondary
O_3	1 Hour	0.09 ppm (180 µg/m³)	–	–
	8 Hours	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³) [c]	0.070 ppm (137 µg/m³) [c]
CO	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	–
	8 Hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	–
NO_2	1 Hour	0.18 ppm (339 µg/m³)	100 ppb (188 µg/m³)	–
	AAM	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	0.053 ppm (100 µg/m³)
SO_2	1 Hour	0.25 ppm (655 µg/m³)	75 ppb (196 µg/m³)	–
	3 Hours	–	–	0.5 ppm (1,300 µg/m³)
	24 Hours	0.04 ppm (105 µg/m³)	0.14 ppm (365 ug/m³) [d]	–
	AAM	–	0.030 ppm (81 ug/m³) [d]	–
Pb	30-Day Average	1.5 µg/m³	–	–
	Calendar Quarter	–	1.5 µg/m³ [e]	1.5 µg/m³ [e]
	Rolling 3-Month Average	–	0.15 µg/m³	0.15 µg/m³
PM_{10}	24 Hours	50 µg/m³	150 µg/m³ [f]	150 µg/m³ [f]
	AAM	20 µg/m³	–	–
$PM_{2.5}$	24 Hours	–	35 µg/m³ [g]	35 µg/m³ [g]
	AAM	12 µg/m³	12.0 µg/m³	15 µg/m³
Sulfates	24 Hours	25 µg/m³	–	–
H_2S	1 Hour	0.03 ppm (42 µg/m³)	–	–
C_2H_3Cl	24 Hours	0.01 ppm (26 µg/m³)	–	–
Visibility Reducing Particles	8 Hours	Extinction coefficient of 0.23 per kilometer	–	–

Notes:

[a] Pollutant concentrations should not exceed CA standards for O_3, CO, SO_2 (1- and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility reducing particles. Pollutant concentrations shall not equal or exceed any other concentrations.

[b] Pollutant concentrations should not exceed national standards (other than O_3, particulate matter, and those based on AAM) more than once per year. Annual standards should never be exceeded.

[c] An area achieves the O_3 standard when the fourth-highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard.

[d] Applies to areas of nonattainment; however, there are no SO_2 nonattainment areas in California.

[e] Applies to areas of Pb nonattainment in Los Angeles County only.

[f] An area achieves the PM_{10} 24-hour standard when the expected number of days per calendar year with a 24-hour average concentration greater than 150 µg/m³ is equal to or less than one.

[g] An area achieves the $PM_{2.5}$ 24-hour standard when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

mg/m3: Milligrams per cubic meter
µg/m3: Micrograms per cubic meter
ppb: Parts per billion
ppm: Parts per million
AAM: Annual Arithmetic Mean

Source: (CARB 2016)

Sulfur Dioxide

SO_2 is a colorless, acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage building materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. SO_2 is a precursor to the formation of atmospheric sulfate and particulate matter, and contributes to potential atmospheric sulfuric acid formation that can precipitate downwind as acid rain (USEPA 2016a).

Lead

Lead has a range of adverse neurotoxin health effects and was formerly released into the atmosphere primarily via leaded gasoline products. The phase-out of leaded gasoline in California resulted in decreasing levels of atmospheric lead. Most aviation gasoline (general aviation fuel for piston engines) also contains lead. Lead is a highly stable compound that accumulates in the environment and in living organisms. In humans, lead exposures can interfere with the maturation and development of red blood cells, affect liver and kidney functions, and cause nervous system damage (CARB 2015b).

Respirable Particulate Matter

Particulate matter is a combination of liquid or solid particles suspended in the air. PM_{10} particles are smaller than 10 micrometers in diameter, and typically include dust, pollen, and mold. Liquid particles include those from sprays and other toxic chemical compounds. PM_{10} particles are a threat to health because they can enter the lungs and are small enough that the respiratory system cannot naturally filter them out. PM_{10} can exacerbate asthma and bronchitis, and potentially contribute to premature death (USEPA 2016a).

Fine Particulate Matter

Particulate matter is a combination of liquid or solid particles suspended in the air. $PM_{2.5}$ particles are smaller than 2.5 micrometers in diameter and typically include combustion particles, organic compounds, and metal particles. $PM_{2.5}$ is considered more hazardous to human health than PM_{10} because it can contain a larger variety of dangerous components than PM_{10}, and can travel farther into the lungs, potentially causing scarring of lung tissue and reduced lung capacity (USEPA 2016a).

Existing Air Quality Conditions

Air Basin Air Quality Designations

USEPA and CARB designate attainment status for air quality standards (NAAQS or CAAQS) within air basins. Attainment areas meet or exceed ambient air quality standards and nonattainment areas do not. Nonattainment areas are sometimes classified by degree of underperformance (i.e., marginal, moderate, serious, severe, and extreme). If there is insufficient air quality monitoring data to support a classification, the area is unclassified. It is generally assumed that unclassified areas are meeting the ambient air quality standard. Table 3.3-2 presents a summary of the air quality attainment designations by USEPA and CARB for the SCAB and SDAB in the proposed project area.

Table 3.3-2 Air Basin Designations

Pollutant	SCAB		SDAB	
	Federal Designation	State Designation	Federal Designation	State Designation
O_3	Nonattainment (Extreme)	Nonattainment	Nonattainment (Moderate)	Nonattainment
CO	Unclassified/Attainment	Attainment	Unclassified/Attainment	Attainment
NO_2	Unclassified/Attainment	Attainment	Unclassified/Attainment	Attainment
SO_2	Attainment	Attainment	Attainment	Attainment
Pb	Unclassified/Attainment [a]	Attainment	Unclassified/Attainment	Attainment
PM_{10}	Attainment	Nonattainment	Unclassified	Nonattainment
$PM_{2.5}$	Nonattainment (Moderate)	Nonattainment	Unclassified/Attainment	Nonattainment
Sulfates	No federal standard	Attainment	No federal standard	Attainment
H_2S	No federal standard	Unclassified	No federal standard	Unclassified
Visibility Reducing Particles	No federal standard	Unclassified	No federal standard	Unclassified

Note:

[a] In the proposed project area.

Sources: (CARB 2016, USEPA 2016c)

Local Air Quality

SDAPCD and SCAQMD have ambient air quality monitoring stations in San Diego and Orange Counties. Each monitoring station collects data on a variety of criteria air pollutant concentrations. The "Camp Pendleton" monitoring station is located approximately 4 miles from the proposed project and provides the most representative air data available for ozone, $PM_{2.5}$ (2013 and 2014), and NO_2 in the proposed project vicinity. The "Mission Viejo" monitoring station is located approximately 13 miles from the proposed project and provides the most representative air data available for $PM_{2.5}$ (2015) and PM_{10} in the proposed project vicinity. Table 3.3-3 presents local ambient air quality monitoring data for 2013 through 2015 and compares measured pollutant concentrations with the most stringent applicable NAAQS or CAAQS.

Toxic Air Contaminants

Toxic air contaminants (TACs), also referred to as hazardous air pollutants or air toxics, are a broad class of compounds known to have the potential to cause morbidity or mortality (i.e., have carcinogenic qualities) and include, but are not limited to, the criteria air pollutants listed above and diesel exhaust emissions. TACs are substances identified by the California EPA listed in Title 17, CCR, § 93000. TACs can cause long-term health effects including, but not limited to, cancer, asthma, and neurological damage, as well as short-term health effects including, but not

Table 3.3-3 Local Ambient Air Quality Concentrations at Nearby Monitoring Stations

Pollutant	Most Stringent Applicable Standard	Maximum Concentration		
		2013	2014	2015
O_3 [a]				
Number of days 1-hour standard exceeded	0.09 ppm [b]	0	**1**	0
Maximum 1-hour (ppm)		0.078	**0.097**	0.087
Number of days 8-hour standard exceeded	0.07 ppm [b]	0	**6**	**3**
Maximum 8-hour (ppm)		0.066	**0.079**	**0.076**
NO_2 [a]				
Number of days 1-hour standard exceeded		0	0	0
Maximum 1-hour (ppm)	0.18 ppm [b]	0.081	0.060	0.060
CO				
Number of days 1-hour standard exceeded	20 ppm [b]	–	–	–
Maximum 1-hour (ppm)		–	–	–
Number of days 8-hour standard exceeded	9 ppm [b]	–	–	–
Maximum 8-hour (ppm)		–	–	–
SO_2				
Number of days 1-hour standard exceeded	0.25 ppm [b]	–	–	–
Maximum 1-hour (ppm)		–	–	–
PM_{10} [c]				
Maximum 24-hour (µg/m³)		50.0	40.0	48.0
Estimated Days 24-hour standard exceeded	50 µg/m³ [b]	0	0	0
Estimated Days 24-hour standard exceeded	150 µg/m³ [d]	0	0	0
$PM_{2.5}$				
Maximum 24-hour (µg/m³)		**42.3** [a]	28 [a]	31.5 [c]
Number of days 24-hour standard exceeded	35 µg/m³ [d]	**1** [a]	0 [a]	0 [c]
Annual average (µg/m³)		8.5 [a]	–	7.0 [c]

Notes:
ppm = parts per million
µg/m³ = micrograms per cubic meter
Bold values exceed applicable standard
- indicates that no data is available

[a] Information attained from nearest monitoring station (Camp Pendleton) that records this pollutant.
[b] State standard, not to be exceeded.
[c] Information attained from nearest monitoring station (Mission Viejo) that records this pollutant.
[d] Federal standard, not to be exceeded.

Source: (CARB 2015c)

limited to, eye watering and headaches. TACs in the SDAB have been reduced by 89.2 percent between 1989 and 2013 (SDAPCD 2013).

Diesel exhaust is a complex mixture of gases, vapors, and fine particles. Some of the gaseous components of diesel exhaust, such as benzene, formaldehyde, and 1,3-butadiene, are suspected or known to cause cancer in humans. The particulates in diesel exhaust (diesel particulate matter) is mainly comprised of aggregates of spherical carbon particles coated with inorganic and organic substances (CARB 1998).

Helicopter fuel, including aviation turbine fuel or aviation gasoline has the potential to cause long-term health effects including neurological damage. Aviation gasoline contains air toxics such as formaldehyde. The full extent of long-term health effects from helicopter fuel have not been fully studied (ATSDR 2016).

USEPA regulates hazardous air pollutant emissions for mobile sources through Section 202(l) of the Clean Air Act and the Control of Hazardous Air Pollutants from Mobile Sources (Final Rule). The rule regulates fuel, reducing mobile source air toxics emissions (USEPA 2016b). CARB has also adopted regulations, such as Airborne Toxic Control Measures (ATCMs), to reduce airborne toxics emissions, including measures that apply to mobile sources (CARB 2015a).

Sensitive Receptors

The SCAQMD defines a sensitive receptor as a person in the population who is susceptible to negative health impacts due to air contaminant exposure (SCAQMD 2005a). SDAPCD similarly defines a sensitive receptor as individuals whose health are most effected from exposure to TACs, such as children, the elderly, and the ill (SDAPCD 2015b). Sensitive receptors can be located at the following:

- Schools (K through 12), playgrounds, and childcare centers
- Long-term health care facilities
- Rehabilitation centers
- Convalescent centers
- Hospitals
- Retirement homes

SCAQMD guidance indicates a minimum buffer zone of 300 meters (1,000 feet) between truck traffic and sensitive receptors (SCAQMD 2003). Studies of health risk have found the highest impacts on sensitive receptors within 1,000 feet (CARB 2005).

Sensitive receptors in the proposed project vicinity include nearby residents and children at San Onofre Elementary School. The nearest sensitive receptor to each proposed project work area/activity is listed in Table 3.3-4. Sensitive receptors within 1,000 feet of the proposed project are shown on Figure 3.3-1 and Figure 3.3-2.

Odors

Land uses that generate considerable odors include agriculture, chemical plants, and landfills. Siting a land use that generates odors near existing sensitive receptors, or siting a new sensitive receptor near an existing odor source could result in an odor impact. The level of impact an odor could have on sensitive receptors is dependent upon variables such as wind speed and direction, facility design features, and distance from source to receptor (SCAQMD 2005a).

Land uses in the proposed project area are primarily open space and residential. No substantial sources of odors are located in the vicinity of the proposed project.

Table 3.3-4 Sensitive Receptors within 1,000 Feet of the Proposed Project

Project Feature/ Proposed Activity	Distance to Nearest Sensitive Receptor (feet) [a, b, c]	Receptor Type
Segment A		
Stringing Site	690	Residence
Pier Foundation	900	Residence
Segment B		
Overhead Work Area	340	Residence
Segment E		
Stringing Site	115	Residence
Direct Bury	140	Residence
Pier Foundation Work Area	950	San Onofre Elementary School
Segment F		
Overhead Work	0 [d]	Residence
Pole Topping Area	0 [d]	Residence
Stringing Site	30	Residence
Staging Yards		
Basilone Road	70	Residence
Talega 2	120	Residence
San Mateo	330	Residence
Helicopter ILAs		
Talega West	130	Residence

Notes:

[a] All distances are to nearest parcel boundaries.

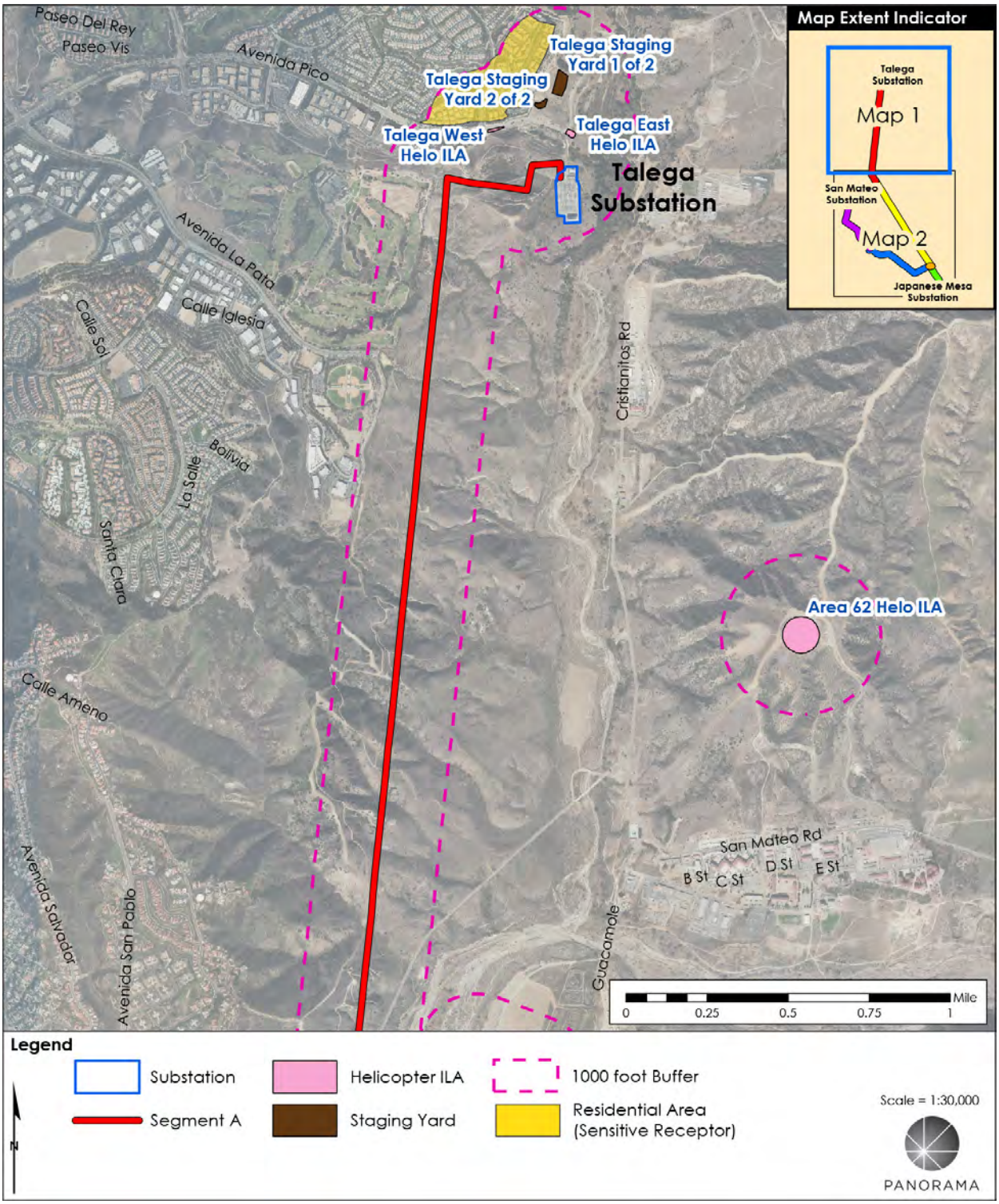
[b] Sensitive receptors are located beyond 1,000 feet within Segments C and D.

[c] Residence locations provided are the nearest residence in relation to the specific project feature.

[d] These activities would occur within the backyards of these residences.

Source: ***Invalid source specified.*** *(ESRI 2016)*

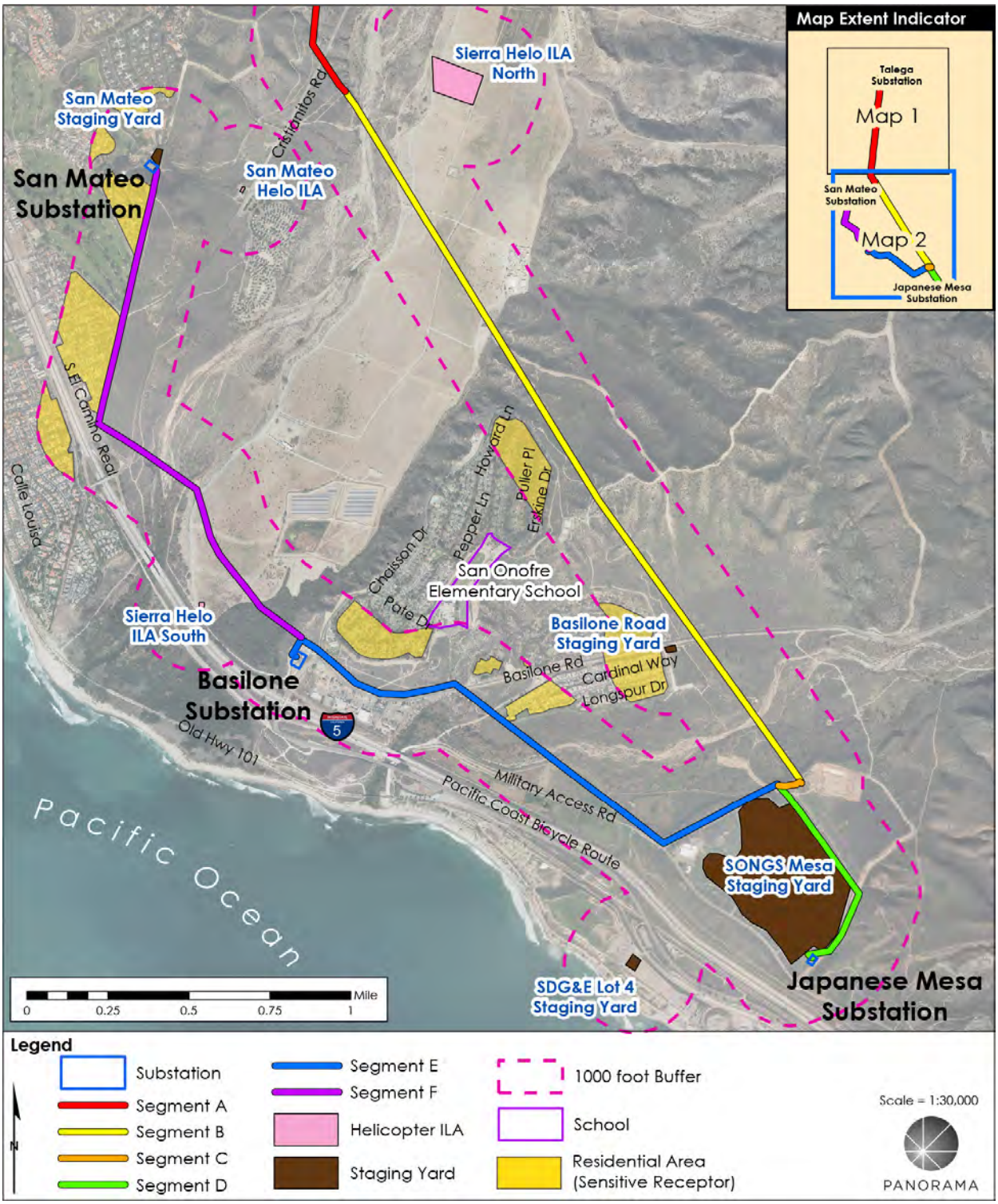
Figure 3.3-1 Sensitive Receptors in the Proposed Project Area (Map 1 of 2)



Sources: (ESRI 2016) (SDG&E 2016a) (USDA 2016)

Note: Individual residences are not shown on this figure due to the scale.

Figure 3.3-2 Sensitive Receptors in the Proposed Project Area (Map 2 of 2)



Source: (ESRI 2016) (SDG&E 2016a) (USDA 2016)

Note: Individual residences are not shown on this figure due to the scale.

3.3.2 Impact Analysis

Summary of Impacts

Table 3.3-5 presents a summary of the CEQA significance criteria and impacts on air quality that would occur during construction, operation, and maintenance of the proposed project.

Table 3.3-5 Summary of Proposed Project Impacts on Air Quality

Would the Proposed Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Impact Discussion

a) Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?	**Significance Determination**
	No impact

Construction

The applicable air quality plans for San Diego County are the Regional Air Quality Strategy (RAQS) and the Eight-Hour Ozone — 1997 Standard Attainment Plan (Attainment Plan). The applicable air quality plan for Orange County is the 2016 Air Quality Management Plan (2016 AQMP).

Regional Air Quality Strategy

The RAQS outlines how SDAPCD will make progress toward attainment of the ozone CAAQS in the SDAB by addressing emissions of the two ozone precursors: VOCs and NOx. Control measures identified in the RAQS regulate stationary emission sources and some area-wide emission sources (e.g., water heaters and architectural coatings). The RAQS emission

inventories and projections include all sources of ROGs and NO_X. Projections in the RAQS incorporate all current control measures and projected population growth (SDAPCD 2009a). The proposed project would not include the development of new homes or businesses and would not induce population growth in the SDAB (refer to Section 3.13: Population and Housing); therefore, the proposed project would not conflict with or obstruct the RAQS by inducing population growth. The proposed project would not conflict with control measures identified in the RAQS because no new stationary sources would be constructed and no coatings would be applied during construction. No impact would occur.

Eight-Hour Ozone — 1997 Standard Attainment Plan

The Attainment Plan serves as the State Implementation Plan for SDAPCD to achieve the eight-hour ozone NAAQS in the SDAB. As SDAPCD has limited authority to regulate mobile sources of ozone pollutants, SDAPCD coordinated with CARB and USEPA to ensure strategies are implemented to achieve mobile source reductions. Projections in the Attainment Plan are generated using the California Emission Forecasting System, developed by CARB, which incorporates current emission control data and growth. SDAPCD adopted an architectural coatings rule and proposed a low VOC solvent cleaning rule to limit VOC emissions, which are considered control measures in the Attainment Plan (SDAPCD 2007).

The proposed project would increase reliability of electric transmission to MCB CPEN; it would not include the development of new homes or businesses. The proposed project would not induce population growth in the SDAB and would not conflict with or obstruct the Attainment Plan by inducing growth (refer to Section 3.13: Population and Housing). The proposed project would not conflict with control measures identified in the Attainment Plan because no new stationary sources would be constructed, and no coatings would be applied during construction. No impact would occur.

2016 Air Quality Management Plan

The 2016 AQMP identifies strategies to achieve ozone and $PM_{2.5}$ NAAQS, and clean air objectives. Although mobile sources contributed most of the NO_x (precursor to ozone) emissions within the SCAB in 2012, SCAQMD has limited authority to regulate mobile sources. As such, SCAQMD coordinated with CARB and USEPA to ensure strategies are implemented to achieve mobile source reductions. Strategies to address area and stationary sources within SCAQMD's purview are discussed in the 2016 AQMP as well as the emission reductions that would be achieved by CARB's mobile source strategies. SCAQMD has proposed and adopted control measures to limit VOCs from coatings (SCAQMD 2016). Substantial population or employment increases could affect mobile source control strategies that are crucial for achieving attainment. The proposed project does not propose activities that would change population or employment levels within the SCAB. The proposed project would not conflict with or obstruct the 2016 AQMP by inducing growth and would not conflict with control measures identified in the 2016 AQMP because no new stationary sources would be constructed and no coatings would be applied during construction. No impact would occur.

Operation and Maintenance

Operation and maintenance activities for the proposed project would be approximately the same as existing conditions. SDG&E would continue to regularly inspect, maintain, and repair the replaced conductors and power poles in the same manner as the existing TL 695 and 6971 power lines. The proposed project would not cause an increase in emissions generated by equipment and vehicles during operation and maintenance and would not conflict with applicable air quality plans. No impact would occur.

Mitigation Measures: None required.

b) Would the proposed project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	**Significance Determination**
	Less than significant

Construction

Construction activities would occur over eight months, from early to late 2018. Construction vehicles and equipment would generate criteria air pollutant emissions during construction of the proposed project. Emissions-generating activities during construction of the proposed project would include:

- Grading, blading, and vegetation clearing
- Transport of materials and waste
- Reconductoring the power lines
- Trenching

Fugitive dust emissions (PM_{10} and $PM_{2.5}$) would result from operation of helicopters, construction vehicles, and equipment during construction as well as soil-disturbing activities during site preparation and grading. Particulate matter (from diesel exhaust), ROG, and NO_X would be emitted from construction vehicle trips, truck hauling trips, and use of heavy machinery and helicopters.

Construction would occur in the SDAB and SCAB. Approximately 95 percent of the proposed project alignment would be located within the SDAB, and 5 percent would be located within the SCAB. The proposed project emissions have been divided into the two air basins, as appropriate. Table 3.3-6 provides a summary of peak daily unmitigated construction emissions for the proposed project. The construction air emissions modeling calculations and results are provided in Appendix B.

Table 3.3-6 Proposed Project Construction Emissions

	Estimated Peak Daily Pollutant Emissions (pounds/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
San Diego Air Basin						
Construction Emissions	25.9	141	86.0	3.47	45.8	9.43
Significance Threshold [a]	75	250	550	250	100	67

	Estimated Peak Daily Pollutant Emissions (pounds/day)					
Threshold Exceeded?	No	No	No	No	No	No
South Coast Air Basin						
Construction Emissions	1.36	7.41	4.53	0.18	2.41	0.50
Significance Threshold [b]	75	100	550	150	100	55
Threshold Exceeded?	No	No	No	No	No	No

Notes:

[a] SDAPCD Rule 20.2 identified trigger levels for an air quality impact analysis for all pollutants except ROG. SCAQMD's air quality significance threshold is used for ROG.

[b] SCAQMD air quality significance thresholds.

Sources: (SDG&E 2016b, SCAQMD 2015, RCH 2017, SDAPCD 2015a)

The proposed project would not exceed the significance thresholds in either air basin, as shown in Table 3.3-6. The proposed project would also be required to comply with rules developed by SCAQMD and SDAPCD to control fugitive dust during construction. SCAQMD's Rule 403 requires watering of soil or application of a stabilizing agent prior to earth disturbing activities, trucks hauling materials to be covered and maintain 6 inches of freeboard, as well as many other fugitive dust controls for activities within the SCAB (SCAQMD 2005b). SDAPCD's Rules 50.1, 51, 52, and 55 require (1) minimization of particulate matter from any source, (2) minimization of off-site dust plumes and dust from track-out or haul trucks by using measures such as watering or covering cargo and cleaning of roadway dust once a day, and (3) that no discharge cause a nuisance to a considerable number of people for activities within the SDAB (SDAPCD 2009b, SDAPCD 1976, SDAPCD 1997). The impact on existing air quality violations would be less than significant.

Operation and Maintenance

Operation and maintenance activities for the proposed project are expected to have the same intensity, frequency, and duration as operation and maintenance of the existing TL 695 and TL 6971 power lines. SDG&E would continue to perform aerial and ground inspections of the power lines. Operation and maintenance of the proposed project would not create a permanent or ongoing source of emissions because the power lines would be unattended and maintenance activity and associated vehicle and equipment use would occur on an as-needed basis. Emissions during operation and maintenance would not exceed baseline conditions. Air quality standards would not be violated. No impact would occur.

Mitigation Measures: None required.

c) Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Significance Determination
	Less than significant

Construction

The SCAB and SDAB are designated as nonattainment areas for ozone under both NAAQS and CAAQS and nonattainment for $PM_{2.5}$ and PM_{10} under CAAQS. The SCAB is also designated as nonattainment for $PM_{2.5}$ under NAAQS. The proposed project would have a cumulatively considerable impact on air quality if:

- The project would result in emissions above the significance thresholds, or
- The project would violate any action in an attainment plan

SDAPCD developed the Attainment Plan to define action criteria that will allow SDAPCD to achieve attainment of NAAQS and CAAQS ozone standards (SDAPCD 2007). SCAQMD has prepared the 2016 AQMP to define control measures that will allow SCAQMD to achieve attainment of NAAQS and CAAQS ozone and particulate matter standards (SCAQMD 2016). The emissions inventories and projections in the Attainment Plan and 2016 AQMP include current emissions at the time of plan preparation and future emissions from all sources including area (i.e., household uses), stationary (i.e., electricity generation), and mobile (i.e., transportation) sources in the SCAB and SDAB. SCAQMD and SDAPCD have established thresholds of significance for air pollutants and their precursors to attain and maintain ambient air quality standards considering current and future emission sources (cumulative impacts). The thresholds established for ozone precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ are also the thresholds at which a project would be considered to have a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment.

As analyzed under impact b) above, the emissions generated during construction of the proposed project would not exceed the significance thresholds adopted by SCAQMD and SDAPCD for ozone precursor and particulate matter emissions; therefore, construction of the proposed project would not contribute substantially to criteria pollutants in nonattainment. The impact would be less than significant.

Operation and Maintenance

Operation and maintenance activities for the proposed project are expected to have the same intensity, frequency, and duration as operation and maintenance of the existing TL 695 and TL 6971 power lines, as described in under impact b) above. Emissions during operation and maintenance would not exceed baseline conditions and would not contribute to criteria pollutants in nonattainment. No impact would occur.

Mitigation Measures: None required.

d) Would the proposed project expose sensitive receptors to substantial pollutant concentrations?	Significance Determination
	Less than significant

Carbon Monoxide Concentrations

CO emissions from construction traffic could result in localized pollutant impacts. Congested intersections with a large volume of traffic have the greatest potential to cause high, localized concentrations of CO. CO concentrations have the potential to exceed state or national standards when a project could increase vehicle trips at signalized intersections with a level of service (LOS) of E or F, or reduce the LOS to E or F (Caltrans 1997). The proposed project would result in a temporary increase in daily vehicle trips during the eight-month construction period. The increase in vehicle trips, a maximum of 427 trips per day, would be short-term (i.e., two weeks) and dispersed among area roads. Traffic would not noticeably increase as a result of the project and would not substantially increase CO concentrations at signalized intersections. During operation of the proposed project, no additional vehicle trips would occur. The proposed project would not result in a significant increase in CO concentrations. The impact on sensitive receptors from increased CO concentrations would be less than significant.

Toxic Air Contaminants

Diesel-powered equipment and vehicles such as haul trucks, back hoes, and cranes would be used during construction of the proposed project. The operation of diesel-powered equipment would generate diesel exhaust emissions. Helicopters would be operated for approximately 14 days during construction that, depending upon engine type, may be fueled by either aviation turbine fuel or aviation gasoline. The proposed project would be constructed with vehicles and equipment moving along the power line throughout the duration of construction. Construction activities would not be concentrated in any area and construction activities at each pole would last a few days per phase. A health risk assessment was not conducted for the proposed project because construction activities at maximum exposed individual sensitive receptors would last less than two months (OEHHA 2015).

Sensitive receptors are located along the Segment F and portions of Segments A, B, and E, as shown on Figure 3.3-1 and Figure 3.3-2. Several construction work areas and staging yards/helicopter ILAs would be located near sensitive receptors. The closest work areas to receptors would be along Segment F. Activities at these work areas include pole topping and conductor removal. Pole topping and conductor removal activities would not occur for more than a few hours at any one work area. Minor ground-disturbing activities would occur at work areas along the other segments. Activities at work areas could occur for up to 12 hours a day for several weeks. In accordance with 13 CCR § 2485, trucks with a gross vehicle weight rating over 10,000 pounds must not idle longer than five consecutive minutes except under extenuating circumstances. Idling restriction regulations would limit impacts on sensitive receptors near staging areas and work areas.

Children under 16 years of age are more susceptible to carcinogens than adults. As such, schools are considered a location of higher-risk sensitive receptors. The nearest proposed

project work area to a school is a direct bury work area located approximately 950 feet from San Onofre Elementary School. The increase in diesel exhaust emissions 950 feet away or more would not present a health risk to children at the school because the emissions would be short-term and would disperse between the emissions source and the school.

The duration, intensity of activities, distance to sensitive receptors, and equipment types would avoid exposure of sensitive receptors to substantial concentrations of TACs. The impact on sensitive receptors from construction of the proposed project would be less than significant.

Mitigation Measures: None required.

e) Would the proposed project create objectionable odors affecting a substantial number of people?	**Significance Determination**
	Less than significant

Construction of the proposed project would generate temporary odors from diesel exhaust emissions. Residential uses would be located directly adjacent to construction work areas. A study conducted in 1970 analyzed the distance at which diesel exhaust odors could be perceived. The distances for diesel exhaust odors could be perceived were an average of 29 feet for an idling bus and 36 feet for an accelerating bus (Colucci and Barnes 1970). The presented distances are likely conservative due to advances in diesel engines and emission reduction technology since 1970. It is assumed that construction vehicles and equipment with diesel engines would create comparable odors. The concentration of several vehicles in one area adjacent to a residence could result in minimally perceptible odors. Odors would be temporary because construction activities in each work area would occur for several days and up to eight months at staging yards. Staging yards are located at least 70 feet from sensitive receptors and beyond the distance at which diesel exhaust odors could be perceived. Odors from diesel exhaust during construction would potentially be perceptible at a small number of residences directly adjacent to work areas during construction. The diesel exhaust emissions could be perceptible for a short duration of time when vehicles and equipment engines are running in the immediate vicinity of the residence. Due to the short duration of potential exposure to odors from diesel exhaust emissions, the impact would be less than significant.

Mitigation Measures: None required.

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