Air Quality Report

Temescal Canyon Road Bridge Replacement and Road Realignment Project

City of Lake Elsinore

County of Riverside

California Department of Transportation, District 8

Federal Project No. BRLS 5074(015)

FTIP Project ID: RIV111203

September 29, 2017

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

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Prepared By: _____ Date: September 29, 2017

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Approved By: _____ Date: _____

California Department of Transportation
District 8

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Executive Summary

The City of Lake Elsinore (City), in coordination with the California Department of Transportation (Caltrans) District 8, is proposing to replace a bridge over Temescal Wash and realign the roadway in the City of Lake Elsinore, California.

This air quality analysis provides a discussion of the proposed project, the physical setting of the project area, and the regulatory framework for air quality. The analysis provides data on existing air quality and evaluates potential air quality impacts associated with the proposed project.

Historical air quality data show that existing carbon monoxide (CO) levels for the project area and the general vicinity do not exceed either the State or federal ambient air quality standards. The proposed project is located in an attainment/maintenance area for federal CO standards. Using the Caltrans Transportation Project-Level Carbon Monoxide Protocol, a screening level CO hot-spot analysis was conducted to determine whether the proposed project would result in any CO hot spots. It was determined that the proposed project would not result in any exceedances of the 1-hour or 8-hour CO standards.

The proposed project is within a nonattainment area for federal $PM_{2.5}$ and within an attainment/maintenance area for federal PM_{10} (particulate matter less than 2.5 microns and 10 microns, respectively, in size) standards. Therefore, per 40 Code of Federal Regulations, Part 93, analyses are required for conformity purposes. However, the United States Environmental Protection Agency (EPA) does not require hot-spot analyses, qualitative or quantitative, for projects that are not listed in Section 93.123(b)(1) as an air quality concern. Therefore, a $PM_{2.5}$/PM_{10} hot-spot analysis was submitted to the Transportation Conformity Working Group (TCWG) for its review on May 23, 2017. TCWG has determined that the proposed project is not a project of air quality concern (POAQC).

Compliance with South Coast Air Quality Management District (SCAQMD) Rules and Regulations during construction will reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions.

The *Revised Traffic Assessment Memorandum* (May 31, 2017) determined that the proposed project would increase capacity for local vehicular traffic on the bridge, where the daily traffic volume of 10,380 average daily trips (ADT) would remain unchanged from the No Build Alternative during the opening year 2021. However,

the level of service (LOS) rating would improve from LOC C to LOS A due to the increase in bridge capacity from 13,000 to 34,100 vehicles per day. The proposed project would have a beneficial effect in helping to reduce congestion on roadway links in the proposed project vicinity. During the horizon year 2040, an increase in vehicular emissions would occur due to the full development of the Aberhill Villages Specific Plan within the project site. The traffic conditions are forecast to operate at adverse LOS F for both Build and No Build Alternatives; however, the LOS and vehicle delays improves under the Build conditions due to the widening of the bridge and adjoining roadways to four lanes in the future.

The proposed project is required to include an analysis of Mobile Source Air Toxics (MSAT) as part of the National Environmental Policy Act (NEPA) process for highways. It is expected that there would be similar or lower MSAT emissions in the project area under the Build Alternative relative to the No Build Alternative in the design year (2040) due to the reduction in average delay per vehicle trip within the project area.

The proposed project is located in the County of Riverside, which is not among the counties listed as containing serpentine and ultramafic rock. Therefore, the impact from naturally occurring asbestos during project construction would be minimal to none.

The proposed project was determined to be in regional conformity. The proposed project is included in the 2016 Regional Transportation Plan (RTP), which was found to be conforming by the Federal Highway Administration (FHWA)/Federal Transit Administration (FTA) on June 1, 2016. The proposed project is also in the 2015 Federal Transportation Improvement Program (FTIP), which was found to be conforming by the FHWA/FTA on December 15, 2014 (Project ID: RIV111203; In Lake Elsinore – Temescal Canyon Road Bridge Replacement/Widening; Replace Temescal Canyon Road 2 lane bridge with a 4-lane bridge over Temescal Wash, 0.22 mile west of Lake Street [Bridge No. 56C0050]).

On May 22, 2017, an amendment to 2017 Federal Transportation Improvement Program was made to update the description for the bridge replacement and roadway realignment project as follows:

> "Project ID: RIV111203; In Lake Elsinore – Temescal Canyon Road Bridge Replacement/Realignment; Replace Temescal Canyon Road 2-lane bridge with a 4-lane bridge over Temescal Wash, 0.42 mile west of Lake Street and

provide transition to a 2-lane roadway (both sides). Other improvements include construction of 706 ft of sidewalk and striping 8 ft class II bike lanes on each side of the bridge [Bridge No. 56C0050]."

The Build Alternative is consistent with the scope of the design concept of the FTIP. Therefore, the proposed project is in conformance with the State Implementation Plan, and thus, the proposed project was determined to be in local conformity.

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LIST OF ABBREVIATED TERMS

µg/m^3	micrograms per cubic meter
°F	degrees Fahrenheit
AADT	annual average daily traffic
ac	acres
ADT	average daily traffic
AB	Assembly Bill
ACMs	asbestos-containing materials
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
AVSP	Alberhill Villages Specific Plan
BACM	best available control measures
Basin	South Coast Air Basin
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standard
Cal/EPA	California Environmental Protection Agency
CALINE4	California Line Source Dispersion Model, Version 4
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	methane
City	City of Lake Elsinore
CO	carbon monoxide
CO_2	carbon dioxide
County	County of Riverside
Diesel PM	diesel particulate matter plus diesel exhaust organic gases
EIR	Environmental Impact Report
EIS	Environmental Impact Statement

EO	Executive Order
EPA	United States Environmental Protection Agency
FHWA	Federal Highway Administration
ft	foot/feet
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	greenhouse gas
HBP	Highway Bridge Program
HFC	hydrofluorocarbon
HFC-134a	1,1,1,2-tetrafluoroethane
HFC-152a	difluoroethane
HFC-23	fluoroform
IPCC	Intergovernmental Panel on Climate Change
LED	light-emitting diode
lbs/day	pounds per day
LOS	level of service
max	maximum
mi	miles
mph	miles per hour
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
N_2O	nitrous oxide
N/A	Not Available
NAAQS	national ambient air quality standards
NATA	National Air Toxics Assessment
NEPA	National Environmental Policy Act
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
O_3	ozone
OMB	Office of Management & Budget
OPR	Office of Planning and Research
PM	particulate matter

PM_{10}	particulate matter less than 10 microns in size
$PM_{2.5}$	particulate matter less than 2.5 microns in size
POAQC	project of air quality concern
ppm	parts per million
Protocol	Transportation Project-Level Carbon Monoxide Protocol
ROGs	reactive organic gases
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SO_2	sulfur dioxide
TCWG	Transportation Conformity Working Group
USC	United States Code
USDOT	United States Department of Transportation
USGS	United States Geological Survey
UV	ultraviolet
VMT	vehicle miles traveled
VOCs	volatile organic compounds

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Chapter 1 Project Description

1.1 Introduction

The City of Lake Elsinore (City), in cooperation with the California Department of Transportation (Caltrans), District 8, proposes to realign and replace a bridge on Temescal Canyon Road. The project site is located in the City of Lake Elsinore, Riverside County (County), California in Sections 15, 16, 21, and 22, Township 5 South, Range 5 West, San Bernardino Baseline and Meridian as shown on the United States Geological Survey (USGS) *Alberhill, California* 7.5-minute topographic quadrangle map. Figure 1 shows the Project Location and Project Vicinity.

The proposed bridge is 98 feet wide (with a curb-to-curb width of 80 feet), 375 feet long, and a structure depth 5.75 feet at the abutments that will taper to 7.25 feet near the pier/bent. The bridge will be striped with a 14-foot painted median, two 12-foot inside lanes, two 15-foot outside lanes, two 6-foot shoulders that can accommodate a Class II bike lane, and two 6-foot sidewalks separated from vehicular traffic with a concrete barrier, which is necessary due to a posted speed limit greater than 45 miles per hour (mph). This proposed bridge and approximately 200 feet and 131 feet of the roadway, northwest and southeast of the bridge, respectively, will be constructed using Highway Bridge Program (HBP) and local funding.

The road realignment connecting the proposed bridge to Lake Street is separate from this undertaking and part of the adjacent Alberhill Villages Specific Plan (AVSP) project. It will conform to the City's standard for a "Major Highway" with a right-of-way width of 100 feet. This roadway segment from approximately 200 feet southwest of the bridge will connect to Lake Street approximately 180 feet south of the current intersection, which conforms to the location detailed in the City's General Plan Circulation Element. In the interim, the AVSP Project will construct a 2-lane roadway that will include a 696-foot roadway transition to Lake Street.

The realigned Temescal Canyon Road will intersect Lake Street approximately 180 feet south of the current intersection, which conforms to the location detailed in the City's General Plan Circulation Element.

The 850-foot roadway transition segment from the proposed bridge to the existing 2-lane Temescal Canyon Road to the northeast, from approximately 200 feet northeast

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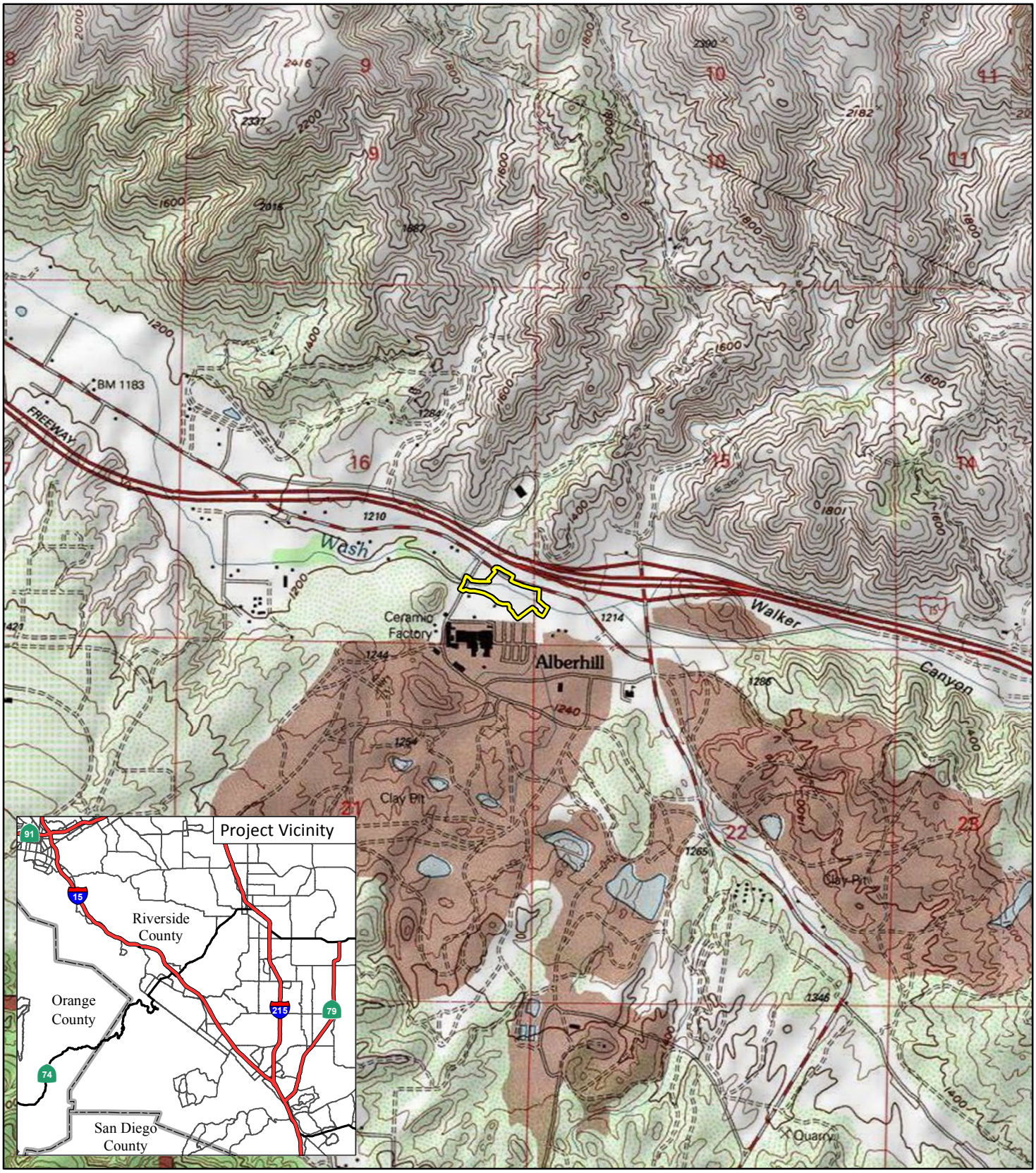

LEGEND

Project Location

FIGURE 1

Temescal Canyon Road Bridge Project

Project Location and Vicinity

BRLS 5074(015)

0 1000 2000

FEET

SOURCE: USGS 7.5' Quad - Lake Elsinore (1988), CA

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of the bridge to the existing Temescal Canyon Road is separate from this undertaking and will be constructed using local funding.

The realigned Temescal Canyon Road will intersect Lake Street approximately 180 feet south of the current intersection, which conforms to the location detailed in the City's General Plan Circulation Element.

On May 22, 2017, as amendment to 2017 Federal Transportation Improvement Program (FTIP) was made to update the description for the bridge replacement and roadway realignment project:

> Project ID: RIV111203; IN LAKE ELSINORE - TEMESCAL CANYON RD BRIDGE REPLACEMENT/REALIGNMENT: REPLACE TEMESCAL CANYON RD. 2 LANE BRIDGE WITH A 4 LANE OVER TEMESCAL WASH, 0.42 MI. W/O LAKE STREET AND PROVIDE TRANSITION TO A 2 LANE ROADWAY (BOTH SIDES). OTHER IMPROVEMENTS INCLUDE CONS OF 706 FT OF SIDEWALK AND 8 FT CLASS II BIKE LNS ON EACH SIDE OF THE BRIDGE. (BRIDGE NO. 56C0050).

As previously stated, the proposed bridge is on a new roadway alignment. In the interim, the existing roadway northwest of the relocated bridge and the new roadway southeast of the relocated bridge will be two lanes (one lane in each direction). In the future, both segments of the roadway will be widened to four lanes.

The area to be potentially affected by the project includes properties within the AVSP in the City of Lake Elsinore. The project will require the permanent acquisition of new right-of-way, temporary construction easements, and permanent easements for drainage. Roadway improvements and maintenance are also expected. Since the proposed bridge is not located in an existing roadway, it will not require relocation of existing utilities (water, sewer, cable, telephone, gas, electric utilities, etc.). However, the bridge sidewalk and deck will include utility openings to accommodate future utilities.

The project will include minimal drainage improvements within Temescal Wash. Activities will include minor regrading of the creek near the bridge and construction of concrete slope protection, cutoff wall, and riprap launch pad to protect the bridge abutments from scour. A 478-foot segment of the existing low-flow channel will be relocated to convey low flows through the proposed bridge. The relocated low-flow channel will extend approximately 100 feet downstream of the proposed bridge. It

will also extend approximately 250 feet upstream of the proposed bridge. The approximate total construction area of the project is 4.04 acres with an impervious area of approximately 2.3 acres (proposed roadway pavement, bridge, and concrete slope protection near the bridge abutment).

The City intends to begin construction of the proposed project in late 2017.

1.2 Need and Purpose

1.2.1 Need

The project is needed for the following reasons:

- The existing bridge structure does not provide adequate channel cross-section and freeboard to convey the 100-year flood waters. The clear channel depth of 1.5 feet below the bridge soffit is undersized and causes flood waters to backup and overtop the bridge deck and its roadway approaches. The existing bridge essentially is serving as a low-flow concrete culvert of an equivalent low-water crossing, which was frequently inundated during the winter storms.
- The existing bridge's rating of "Functionally Obsolete (FO)" is caused by the narrow curb-to-curb width that is "basically intolerable requiring high priority of replacement" and the aforementioned hydraulic deficiency. The bridge's Sufficiency Rating of 68.5, equates to an existing structure that is deteriorated and requires "prompt structural correction."
- The existing structure is on a sharp curved alignment at the west approach for the eastbound traffic, which can only accommodate a safe design speed of 30 to 40 mph. Safe travel speeds are reduced to less than 30 mph on the existing bridge's 10-foot travel lanes. This speed is not acceptable from a traffic operation standpoint as Temescal Canyon Road serves as a Major Highway requiring a design speed of 55 mph (for flat terrain) per City's General Plan.
- Temescal Canyon Road (and the existing bridge) provides east/west access crossing the Temescal Wash and serves as a critical frontage road paralleling Interstate 15 (I-15). This roadway provides an emergency route between the Indian Truck Trail Interchange and the Lake Street Interchange. Major traffic can be expected on Temescal Canyon Road when the traffic flow on I-15 is congested. Continuing increase of traffic volumes on Temescal Canyon Road due to the regional population growth and planned private developments has increased the importance of the road in the regional traffic circulation system.

- The current intersection of Temescal Canyon Road and Lake Street is located approximately 850 feet south of the southbound I-15 ramps at Lake Street. The current location of the intersection of Temescal Canyon Road and Lake Street is not consistent with Caltrans criteria for site distance from the freeway ramps.

1.2.2 Purpose

The purpose of the project is to replace the existing functionally obsolete bridge and connecting roadway with a new bridge and roadway that provides sufficient hydraulic clearance of Temescal Wash and can safely and reliably accommodate anticipated traffic volumes and design speeds consistent with City circulation plans and regional transportation planning for the facility.

1.3 Project Alternatives

Two alternatives are being analyzed in this document: the Build Alternative and the No Build Alternative.

1.3.1 Build Alternative (Replace and Realign Bridge)

The proposed bridge is 98 feet wide (with a curb-to-curb width of 80 feet), 306 feet long, and a structure depth of 5 feet. The bridge will be striped with a 14-foot painted median, two 12-foot inside lanes, two 15-foot outside lanes, two 6-foot shoulders that can accommodate a Class II bike lane, and two 6-foot sidewalks separated from vehicular traffic with a concrete barrier, which is necessary due to a posted speed limit greater than 45 mph. This bridge and approximately 200 feet of the roadway, northwest and southeast of the bridge will be constructed using HBP and local funding. Refer to Figure 2.

The realigned road from the bridge to Lake Street going southeast will conform to the City's standard for a "Major Highway" with a right-of-way width of 100 feet. The ultimate standard roadway section will consist of a painted 14-foot median, two 12-foot inside lanes, two 15-foot outside lanes, two 6-foot shoulders, and two 10-foot parkways that can accommodate a 6-foot wide sidewalk.

1.3.2 No Build Alternative

Under this alternative, the bridge would remain unchanged.

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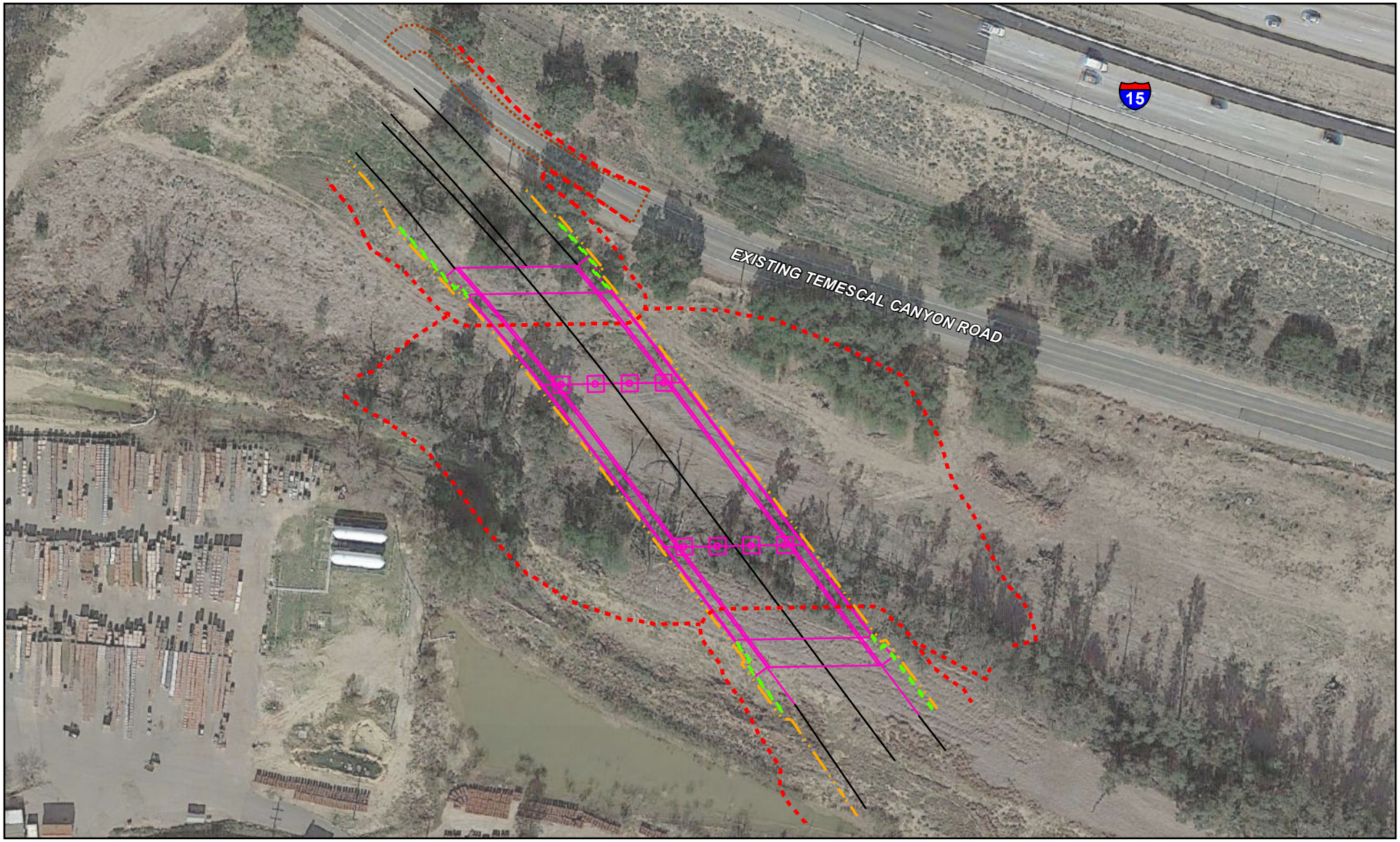

Grading Limits
Alignment
Interim Access Road
Retaining Wall
Proposed ROW
Bridge Structure

N

0 60 120
FEET

Source: Google Earth, 2016; Riverside County, 2015; Aguilar Consulting, 2017.

FIGURE 2

Temescal Canyon Road Bridge Project

Site Plan

BRLS 5074 (015)

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Chapter 2 Environmental Setting

A region's topographic features can affect pollutant levels; therefore, they are used by the California Air Resources Board (ARB) to determine the boundaries of air basins. A local air district has been formed for each air basin; the district is responsible for providing air quality strategies to bring the air basin into compliance with the national ambient air quality standards (NAAQS).

The project site is located in the County of Riverside, an area within the South Coast Air Basin (Basin) that includes the County of Orange and the non-desert parts of the Counties of Los Angeles, Riverside, and San Bernardino. Air quality regulation in the Basin is administered by the South Coast Air Quality Management District (SCAQMD), a regional agency created for the Basin.

2.1 Meteorology

2.1.1 Climate

Air quality in the Basin is affected by various emission sources (e.g., mobile and industry) as well as atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from the second-largest urban area in the United States gives the Basin some of the highest pollutant concentrations in the country.

The annual average temperatures vary throughout the Basin, ranging from the low- to middle-60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, inland areas, including the City, show more variability in annual minimum and maximum temperatures than coastal areas. The monthly average maximum temperature at Lake Elsinore ranges from 65.4 °F in January to 98.1 °F in August. The monthly average minimum temperature ranges from 36.4 °F in January to 59.8 °F in August (Western Regional Climate Center 2017). January is typically the coldest month and July and August are typically the warmest months in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thunderstorms in inland regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The monthly average rainfall at Lake Elsinore typically varies from 2.47 inches in January to 0.02 inch in June with an annual total of 12.01

inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific High, which is the semi-permanent high pressure area of the North Pacific Ocean and the dominating factor in California weather. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in midafternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds at March Air Reserve Base (approximately 15 miles northeast of Lake Elsinore) blow predominantly from the west-northwest, with relatively low velocities (Western Regional Climate Center 2017). Wind speeds in Lake Elsinore average between 5 and 6 mph. Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months and disperse air contaminants. The Santa Ana wind conditions tend to last for several days at a time (Western Regional Climate Center 2017).

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollution concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and nitrogen oxides (NO_X) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NOx to form photochemical smog or ozone (O_3).

2.1.2 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific

research attributes these climatological changes to greenhouse gases (GHGs), particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and the World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs related to human activity that include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, hydrofluorocarbon (HFC)-23 (fluoroform), HFC-134a (1,1,1,2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In the United States, the main source of GHG emissions is electricity generation, followed by transportation (U.S. EPA 2016). In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles make up the largest source of GHG-emitting sources (ARB 2016). The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

Two terms are typically used when discussing how California addressed the impacts of climate change: “greenhouse gas mitigation” and “adaptation.” “Greenhouse gas mitigation” is a term for reducing GHG emissions to reduce or “mitigate” the impacts of climate change. “Adaptation” refers to planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels) (ARB 2016).

The four primary strategies utilized in reducing GHG emissions from transportation sources are to: (1) improve system and operation efficiencies, (2) reduce growth of vehicle miles traveled (VMT), (3) transition to lower GHG fuels, and (4) improve vehicle technologies. To be most effective, all four strategies should be pursued collectively. The following regulatory setting section outlines State and federal efforts to comprehensively reduce GHG emissions from transportation sources.

2.1.2.1 Federal

Although climate change and GHG reduction are concerns at the federal level, to date no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Council on Environmental Quality (CEQ) released final guidance (August 1, 2016) for federal agencies on how to consider the impacts of their actions on global climate change in their NEPA reviews. This final guidance advises agencies to consider both the effects of a proposed action on climate change, as indicated by its estimated GHG emissions, and the effects of climate change on a proposed action, within the existing NEPA regulatory framework. The final guidance applies to proposed federal agency actions that are subject to NEPA analysis.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR) was passed by Congress and set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

Energy Policy Act of 2005 (109th Congress H.R.6 (2005–2006) sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Action of 1975 and Corporate Average Fuel Standards: The Energy Policy and Conservation Act of 1975 (42 USC Section 6201 [1975]) establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance,* 74 Federal Register 52117 (October 8, 2009): This federal EO set sustainability goals for federal agencies and focuses on making improvements in their

environmental, energy, and economic performance. It instituted as policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.

Executive Order 13653, *Preparing the United States for the Impacts of Climate Change*, 78 Federal Register 66817, (November 6, 2013): This EO builds on a previously released (and since revoked) EO I3514 Federal Leadership in Environmental Energy, and Economics Performance to establish direction for federal agencies on how to improve on climate preparedness and resilience strategies.

President Obama's Climate Action Plan, June 2013: President Obama announced a comprehensive plan for action to cut carbon pollution, prepare the nation for the impacts of climate change, and lead international efforts to address climate change as a global challenge. The Plan builds on the work of the 13 U.S. Global Change Research Program (USGCRP) member agencies, the USGCRP National Climate Assessment program, and the Interagency Climate Change Adaptation Task Force.

Executive Order 13693, *Planning for Federal Sustainability*, 80 Federal Register 15869 (March 2015). This EO reaffirms the policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities. It sets sustainability goals for all agencies to promote energy conservation, efficiency, and management by reducing energy consumption and GHG emissions. It builds on the adaptation and resiliency goals in EO 13693 to ensure agency operations and facilities prepare for impacts of climate change. This EO revokes EO 13514.

U.S. EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts* v. *EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions.

U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010 and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August

2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules' long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and ARB will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025.

NHTSA and EPA issued a Final Rule for "Phase 2" for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO_2 emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

2.1.2.2 State

With the passage of several pieces of legislation including State Senate and Assembly Bills and Executive Orders, California launched an innovative and proactive approach in dealing with GHG emissions and climate change.

- Assembly Bill (AB) 1493, Pavley, Vehicular Emissions-Greenhouse Gases, 2002: This bill requires the ARB to develop and implement regulations to reduce automobile and light-truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009 model year.
- Executive Order (EO) S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and SB 32 in 2016.
- AB 32, Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

- EO S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and State agencies with regard to climate change.
- EO S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.
- Senate Bill (SB) 97, Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.
- SB 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the ARB to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.
- SB 391 Chapter 585, 2009 California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.
- Executive Order B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero emission vehicles. It directs these entities to achieve various benchmarks related to zero emission vehicles.
- Executive Order B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the

2030 target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$). Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

- SB 32, Updates to the Global Warming Solutions Act of 2006: SB 32 which was signed into law on September 19, 2016, updated AB 32 to meet year 2030 targets and included a mandate to reduce GHG emissions to 40 percent below 1990 levels by 2030.

2.2 Air Quality Management

Pursuant to the CAA, the EPA established the national ambient air quality standards (NAAQS). The NAAQS were established for six major pollutants, termed criteria pollutants. Criteria pollutants are defined as those pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health and welfare. The NAAQS are two-tiered: primary, to protect public health; and secondary, to prevent degradation to the environment (e.g., impairment of visibility and damage to vegetation and property).

The six criteria pollutants are O_3, CO, particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. PM includes $PM_{2.5}$ and PM_{10}. The standards for these pollutants are shown in Table 2.1, and the health effects from exposure to the criteria pollutants are described later in this analysis.

2.3 Transportation Conformity Rule

The conformity requirement is based on CAA Section 176(c), which prohibits the United States Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to the State Implementation Plan (SIP) for attaining the NAAQS. "Transportation Conformity" applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and "maintenance" (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. The EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for State standards regardless of the status of the area.

Table 2.1: State and Federal Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard[8]	Federal Standard[8]	Principal Health and Atmospheric Effects	Typical Sources	Attainment Status
Ozone (O_3)	1 hour 8 hours	0.09 ppm 0.070 ppm	--- 0.070 ppm[4] (4th highest in 3 years)	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NO_X) in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes.	Federal: Extreme Nonattainment (8-hour) State: Nonattainment (1-hour and 8-hour)
Carbon Monoxide (CO)	1 hour 8 hours 8 hours (Lake Tahoe)	20 ppm 9.0 ppm[1] 6 ppm	35 ppm 9 ppm ---	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.	Federal: Attainment/ Maintenance State: Attainment
Respirable Particulate Matter (PM_{10})[2]	24 hours Annual	50 µg/m^3 20 µg/m^3	150 µg/m^3 ---[2] (expected number of days above standard < or equal to 1)	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM_{10}.	Dust- and fume-producing industrial and agricultural operations; combustion smoke and vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.	Federal: Attainment/Maintenance State: Nonattainment
Fine Particulate Matter ($PM_{2.5}$)[2]	24 hours Annual 24-hour (conformity process[5]) Secondary Standard (annual; also for conformity process[5])	--- 12 µg/m^3 --- ---	35 µg/m^3 12.0 µg/m^3 65 µg/m^3 12 µg/m^3 (98th percentile over 3 years)	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the $PM_{2.5}$ size range. Many toxic and other aerosol and solid compounds are part of $PM_{2.5}$.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including NO_X, sulfur oxides (SO_X), ammonia, and ROG.	Federal: Moderate Nonattainment State: Nonattainment
Nitrogen Dioxide (NO_2)	1 hour Annual	0.18 ppm 0.030 ppm	0.100 ppm[6] (98th percentile over 3 years) 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain. Part of the "NO_X" group of ozone precursors.	Motor vehicles and other mobile sources; refineries; industrial operations.	Federal: Attainment/Maintenance State: Attainment

Table 2.1: State and Federal Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard[8]	Federal Standard[8]	Principal Health and Atmospheric Effects	Typical Sources	Attainment Status
Sulfur Dioxide (SO_2)	1 hour 3 hours 24 hours Annual Arithmetic Mean	0.25 ppm --- 0.04 ppm ---	0.075 ppm[7] (99th percentile over 3 years) 0.5 ppm[9] 0.14 ppm 0.03 ppm	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.	Federal: Attainment/Unclassified State: Attainment/Unclassified
Lead (Pb)[3]	Monthly Calendar Quarter Rolling 3-month average	1.5 µg/m^3 --- ---	--- 1.5 µg/m^3 0.15 µg/m^3 [10]	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from gasoline may exist in soils along major roads.	Federal: Nonattainment (Los Angeles County only) State: Attainment
Sulfate	24 hours	25 µg/m^3	---	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.	Federal: N/A State: Attainment/Unclassified
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm	---	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea.	Industrial processes such as refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.	Federal: N/A State: Attainment/Unclassified
Visibility Reducing Particles (VRP)	8 hours	Visibility of 10 miles or more (Tahoe: 30 miles) at relative humidity less than 70 percent	---	Reduces visibility. Produces haze. NOTE: Not related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other “Class I” areas.	See particulate matter above.	Federal: N/A State: Attainment/Unclassified

Table 2.1: State and Federal Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard[8]	Federal Standard[8]	Principal Health and Atmospheric Effects	Typical Sources	Attainment Status
Vinyl Chloride[3]	24 hours	0.01 ppm	---	Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes	Federal: N/A State: Attainment/Unclassified

Source 1: California Air Resources Board (ARB). Website: www.arb.ca.gov/research/aaqs/aaqs2.pdf (March 2016).
Source 2: ARB, Area Designations. Website: http://www.arb.ca.gov/desig/desig.htm (accessed March 29, 2017).

[1] Rounding to an integer value is not allowed for the State 8-hour CO standard. Violation occurs at or above 9.05 ppm.

[2] Annual PM_{10} NAAQS revoked October 2006; was 50 µg/m^3. 24-hour $PM_{2.5}$ NAAQS tightened October 2006; was 65 µg/m^3. Annual $PM_{2.5}$ NAAQS tightened from 15 µg/m^3 to 12 µg/m^3 December 2012, and secondary standard set at 15 µg/m^3.

[3] The ARB has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM_{10} and, in larger proportion, $PM_{2.5}$. Both the ARB and the EPA have identified lead and various organic compounds that are precursors to ozone and $PM_{2.5}$ as toxic air contaminants. There are no exposure criteria for substantial health effects due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong.

[4] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 ppm to 0.070 ppm.

[5] The 65 µg/m^3 $PM_{2.5}$ (24-hr) NAAQS was not revoked when the 35 µg/m^3 NAAQS was promulgated in 2006. The 15 µg/m^3 annual $PM_{2.5}$ standard was not revoked when the 12 µg/m^3 standard was promulgated in 2012. The 0.08 ppm 1997 ozone standard is revoked for conformity purposes only when area designations for the 2008 0.75 ppm standard become effective for conformity use (7/20/2013). Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for newer NAAQS are found adequate, SIP amendments for the newer NAAQS are approved with a emission budget, EPA specifically revokes conformity requirements for an older standard, or the area becomes attainment/unclassified. SIP-approved emission budgets remain in force indefinitely unless explicitly replaced or eliminated by a subsequent approved SIP amendment. During the "Interim" period prior to availability of emission budgets, conformity tests may include some combination of build vs. no build, build vs. baseline, or compliance with prior emission budgets for the same pollutant.

[6] Final 1-hour NO_2 NAAQS published in the Federal Register on February 9, 2010, effective March 9, 2010. Initial area designation for California (2012) was attainment/unclassifiable throughout. Project-level hot-spot analysis requirements do not currently exist. Near-road monitoring starting in 2013 may cause redesignation to nonattainment in some areas after 2016.

[7] The EPA finalized a 1-hour SO_2 standard of 75 ppb in June 2010. Nonattainment areas have not yet been designated as of September 2012.

[8] State standards are "not to exceed" or "not to be equaled or exceeded" unless stated otherwise. Federal standards are "not to exceed more than once a year" or as described above.

[9] Secondary standard, set to protect public welfare rather than health. Conformity and environmental analysis addresses both primary and secondary NAAQS.

[10] Lead NAAQS are not considered in Transportation Conformity analysis.

µg/m^3 = micrograms per cubic meter
ARB = California Air Resources Board
EPA = United States Environmental Protection Agency
N/A = Not Available
NAAQS = national ambient air quality standards
ppb = parts per billion
ppm = parts per million
SIP = State Implementation Plan

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Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for CO, NO_2, O_3, PM_{10}, and $PM_{2.5}$, and in some areas (although not in California), SO_2. California has nonattainment or maintenance areas for all of these transportation-related "criteria pollutants" except SO_2, and also has a nonattainment area for lead; however, lead is not currently required by the CAA to be covered in transportation conformity analysis.

As part of the Clean Air Rules of 2004, the EPA published a final rule in the Federal Register on July 1, 2004, to amend the Transportation Conformity Rule to include criteria and procedures for the new 8-hour O_3 and $PM_{2.5}$ NAAQS. The final rule addressed a March 2, 1999, court decision by incorporating the EPA and USDOT guidance. On July 20, 2004, the EPA published a technical correction notice to correct two minor errors in the July 1, 2004, notice. To remain consistent with the stricter federal standards, the ARB approved a new 8-hour O_3 standard (0.07 parts per million [ppm], not to be exceeded) for O_3 on April 28, 2005. Additionally, the ARB retained the current 1-hour-average standard for O_3 (0.09 ppm) and the current monitoring method for O_3, which uses the ultraviolet (UV) photometry method.

In April 2003, the EPA was cleared by the White House Office of Management and Budget (OMB) to implement the 8-hour ground-level O_3 standard. The ARB provided the EPA with California's recommendations for 8-hour O_3 area designations on July 15, 2003. The recommendations and supporting data were an update to a report submitted to the EPA in July 2000. On December 3, 2003, the EPA published its proposed designations. The EPA's proposal differs from the State's recommendations primarily on the appropriate boundaries for several nonattainment areas. The ARB responded to the EPA's proposal on February 4, 2004. On April 15, 2004, the EPA announced the new nonattainment areas for the 8-hour O_3 standard. The designations and classifications became effective on June 15, 2004. The transportation conformity requirement became effective on June 15, 2005.

The EPA proposed a $PM_{2.5}$ implementation rule in September 2003 and made final designations in December 2004. The $PM_{2.5}$ standard complements existing national and State ambient air quality standards that target the full range of inhalable PM_{10}.

Air quality monitoring stations are located throughout the nation and maintained by the local air districts and State air quality regulating agencies. Data collected at permanent monitoring stations are used by the EPA to identify regions as "attainment," "nonattainment," or "maintenance," depending on whether the regions

meet the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA. In addition, different classifications of nonattainment, such as marginal, moderate, serious, severe, and extreme, are used to classify each air basin in the State on a pollutant-by-pollutant basis. The classifications are used as a foundation to create air quality management strategies to improve air quality and comply with the NAAQS. Previously referenced Table 2.1 lists the attainment status for each of the criteria pollutants in the Basin.

2.4 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics and PM_{10}/$PM_{2.5}$ are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Currently, there is no sensitive receptor located within ¼ mile from the project site. Also, no sensitive receptor would be developed near the project site during opening year 2021. It is anticipated that by horizon year 2040, the proposed new AVSP residences (sensitive land uses) would be located adjacent to the project site.

Chapter 3 Regulatory Framework

3.1 Federal Clean Air Act

The CAA (1977 Amendments–42 United States Code [USC] 7401 et seq.) states that the federal government is prohibited from engaging in, supporting, providing financial assistance for, licensing, permitting, or approving any activity that does not conform to an applicable SIP. Federal actions relating to transportation plans, programs, and projects developed, funded, or approved under 23 USC of the Federal Transit Act (40 USC 1601 et seq.) are covered under separate regulations for transportation conformity.

In the 1990 CAA amendments, the EPA included provisions requiring federal agencies to ensure that actions undertaken in nonattainment or attainment-maintenance areas are consistent with applicable SIPs. The process of determining whether or not a federal action is consistent with an applicable SIP is called conformity.

3.2 California Clean Air Act

The ARB administers air quality policy in California. These standards, included with the NAAQS in previously referenced Table 2.1, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, California Ambient Air Quality Standard (CAAQS) have been established for visibility-reducing particulates, hydrogen sulfide, and sulfates. The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with the CAAQS. These AQMPs also serve as the basis for preparation of the SIP for the State of California.

The ARB establishes policy and statewide standards and administers the State's mobile source emissions control program. In addition, the ARB oversees air quality programs established by State statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987.

3.3 California State Implementation Plan

Federal clean air laws require areas with unhealthy levels of O_3, CO, NO_2, SO_2, and inhalable PM to develop plans, known as SIPs, describing how they will attain

NAAQS. The 1990 amendments to the CAA set new deadlines for attainment based on the severity of the pollution problem and launched a comprehensive planning process for attaining the NAAQS. The promulgation of the new national 8-hour O_3 standard and the $PM_{2.5}$ standards in 1997 will result in additional statewide air quality SIPs, which are not single documents, but a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, State regulations, and federal controls. Many of California's SIPs rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes the ARB the Lead Agency for all purposes related to the SIP. Local air districts and other agencies, such as the Bureau of Automotive Repair, prepare SIP elements and submit them to the ARB for review and approval. The ARB then forwards SIP revisions to the EPA for approval and publication in the Federal Register. CFR Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items included in the California SIP. Many additional California submittals are pending EPA approval.

3.4 South Coast Air Quality Management District

The SCAQMD and Southern California Association of Governments (SCAG) are responsible for formulating and implementing the AQMP for the Basin. Every three years, the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The SCAQMD adopted the 2016 AQMP on March 1, 2017, which it describes as a regional and multiagency effort (i.e., the SCAQMD Governing Board, ARB, SCAG, and EPA). State and federal planning requirements will include developing control strategies, attainment demonstration, reasonable further progress, and maintenance plans. The 2016 AQMP also incorporates substantial new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools.

The 2016 AQMP updates the attainment demonstration for the federal standards for O_3 and PM_{10}/$PM_{2.5}$, provides a basis for a maintenance plan for NO_2, CO and PM_{10} for the future. The 2016 AQMP proposes policies and measures to achieve federal and State standards for healthful air quality in the Basin. This revision to the AQMP also addresses several State and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality

modeling tools. This AQMP is consistent with and builds on the approaches taken in the 2012 AQMP for the Basin for the attainment of the federal O_3 air quality standard.

The 2016 AQMP incorporated the latest scientific and technological information and planning assumptions, including the 2016 Regional Transportation Plan (RTP)/ Sustainable Communities Strategy (SCS) and updated emission inventory methodologies for various source categories. The 2016 AQMP included the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. The SCAQMD adopted the 2016 AQMP in March 2017 and forwarded it to ARB for review and approval.

SCAG is responsible under the CAA for determining the conformity of projects, plans, and programs with the SCAQMD AQMP. As indicated in the California Environmental Quality Act (CEQA) *Air Quality Handbook*, there are two main indicators of consistency:

- Whether the proposed project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and
- Whether the proposed project would exceed the AQMP's assumptions for 2030 or increments based on the year of project build out and phase.

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Chapter 4 Monitored Air Quality

The SCAQMD operates several air quality monitoring stations within the Basin. The air quality monitoring station closest to the site is the Lake Elsinore 506 West Flint Street station, which monitors most air pollutant data, except for SO_2 and $PM_{2.5}$, which were obtained from the Riverside Rubidoux 5888 Mission Boulevard station. Air quality trends identified from data collected at both air quality monitoring stations between 2014 and 2016 are listed in Table 4.1.

The following air quality information briefly describes the various types of pollutants monitored within the vicinity of the proposed project study area.

4.1 Ozone

O_3, a colorless gas with a sharp odor, is one of a number of substances called photochemical oxidants (highly reactive secondary pollutants). These oxidants are formed when hydrocarbons, NO_X, and related compounds interact in the presence of ultraviolet sunlight. The Basin is a nonattainment area for both the federal and State ozone standards. The federal 8-hour O_3 standard was exceeded 94 days in the past three years, and the state 8-hour O_3 standard was exceeded 115 times in the past three years. The State 1-hour O_3 standard was exceeded up to 51 times per year in the past three years.

4.2 Carbon Monoxide

CO is formed by the incomplete combustion of fossil fuels and is emitted almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. The entire Basin is in attainment/maintenance for the federal CO standard and attainment for the State CO attainment standard. State and federal standards were not exceeded between 2014 and 2016.

4.3 Nitrogen Dioxide

NO_2 is a reddish-brown gas with an odor similar to bleach and is a byproduct of fuel combustion, which results from mobile and stationary sources. It has complex daily (diurnal) concentrations that are typically higher at night. NO_2 is itself a regulated pollutant, but it also reacts with hydrocarbons in the presence of sunlight to form O_3 and other compounds that make up photochemical smog. NO_2 decreases lung

Table 4.1: Ambient Air Quality Monitored in the Project Vicinity

Pollutant	Standard	2014	2015	2016
Ozone (O_3)				
Maximum 1-hr concentration (ppm)		0.104	0.131	0.124
Number of days exceeded:	State: > 0.09 ppm	18	15	18
Maximum 8-hr concentration (ppm)		0.087	0.099	0.094
Number of days exceeded:	State: > 0.070 ppm	35	45	35
	Federal: > 0.070 ppm[1]	31	44	19
Carbon Monoxide (CO)				
Maximum 1-hr concentration (ppm)		1.9	0.8	1.2
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hr concentration (ppm)		1.4	0.6	0.6
Number of days exceeded:	State: ≥ 9 ppm	0	0	0
	Federal: ≥ 9 ppm	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-hr concentration (ppm)		0.045	0.047	0.051
Number of days exceeded:	State: > 0.18 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.008	0.008	0.008
Exceeded for the year:	State: > 0.030 ppm	0	0	0
	Federal: > 0.053 ppm	0	0	0
Sulfur Dioxide (SO_2)				
Maximum 24-hr concentration (ppm)		0.013	0.010	0.012
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.0026	0.0027	0.0023
Exceeded for the year:	Federal: > 0.030 ppm	0	0	0
Coarse Particulates (PM_{10})				
Maximum 24-hr concentration (µg/m3)		86.8	90.7	65.4
Number of days exceeded:	State: > 50 µg/m^3	1	1	1
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		26.0	20.1	20.2
Exceeded for the year:	State: > 20 µg/m^3	Yes	Yes	Yes
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hr concentration (µg/m^3)		37.2	36.0	36.2
Number of days exceeded:	Federal: > 35 µg/m^3	1	1	2
Annual arithmetic average concentration (µg/m^3)		15.5	10.4	11.9
Exceeded for the year:	State: > 12 µg/m^3	1	0	0
	Federal: > 12 µg/m^3	1	0	0

Source 1: United States Environmental Protection Agency (EPA). AirData Monitor Value Reports 2017. Website: https://www3.epa.gov/airdata/ad_rep_mon.html, accessed May 2017.
Source 2: California Air Resources Board (ARB). iADAM: Air Quality Data Statistics. Website: http://www.arb.ca.gov/adam/welcome.html, accessed May 2017.

[1] The exceedances of the federal 8-hr O_3 standard are based on the old 0.075 ppm standard. In October 2015, the EPA revised the standard to 0.070 ppm.

µg/m^3 = micrograms per cubic meter
hr = hour
PM_{10} = particulate matter less than 10 microns in size
ppm = parts per million
EPA = United States Environmental Protection Agency
ND = No data available.
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

function and may reduce resistance to infection. The entire Basin has not exceeded either federal or State standards for NO_2 in the last five years. It is designated as a maintenance area under the federal standards and a nonattainment area under the State standards.

4.4 Sulfur Dioxide

SO_2 is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter ($PM_{2.5}$), and reduces visibility and the level of sunlight. The entire Basin is in attainment with both federal and State SO_2 standards.

4.5 Coarse Particulate Matter

PM_{10} occurs from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and substantially reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. The State 24-hour and annual PM_{10} standards were exceeded each year in the past three years.

Over 99 percent of inhaled particulate matter is either exhaled or trapped in the upper areas of the respiratory system and expelled. The balance enters the windpipe and lungs, where some particulates cling to protective mucus and are removed. Other mechanisms, such as coughing, also filter out or remove particles. Collectively, these pulmonary clearance mechanisms protect the lungs from the majority of inhalable particles.

Irritating odors are often associated with particulates. Some examples of sources of these types of odors are gasoline and diesel engine exhausts, large-scale coffee roasting, paint spraying, street paving, and trash burning.

4.6 Fine Particulate Matter

$PM_{2.5}$ consists of “fine” particles and is believed to pose the greatest health risk. Because of their small size (approximately one-thirtieth the average width of a human hair), fine particles can lodge deeply into the lungs. Particulate matter impacts primarily affect infants, children, the elderly, and those with preexisting cardiopulmonary disease. Industry groups challenged the new standard in court, and implementation of the standard was blocked.

The federal 24-hour $PM_{2.5}$ standard was exceeded each year in the past three years.

4.7 Volatile Organic Compounds or Reactive Organic Gases

Hydrocarbon compounds are compounds containing various combinations of hydrogen and carbon atoms that exist in the ambient air. Volatile organic compounds (VOCs) contribute to the formation of smog and/or may themselves be toxic. VOCs often have an odor, and some examples include gasoline, alcohol, and solvents used in paints. There are no specific State or federal VOC thresholds, as they are regulated by individual air districts as O_3 precursors. Reactive organic gases (ROGs) are a form of VOCs.

4.8 Lead

Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the bloodstream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. With the exception of Los Angeles County, which is in nonattainment for State and federal standards, the entire Basin is in attainment for State and federal lead standards.

Chapter 5 Potential Air Quality Impacts

5.1 Short-Term Impacts

During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment also are anticipated and would include CO, NO_X, VOCs, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and toxic air contaminants such as diesel exhaust particulate matter.

Construction would involve vegetation clearing, construction activities, and paving roadway surfaces. Construction-related effects on air quality from the bridge replacement and realignment project would be greatest during the site preparation phases because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. If not properly controlled, these activities would temporarily generate PM_{10}, $PM_{2.5}$, CO, SO_2, NO_X, and VOCs. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after drying. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, the silt content of soil, wind speed, and the amount of equipment operating at the time. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_X, VOCs, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase while vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

SO_2 is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting federal standards can contain up to 5,000 ppm of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and ARB regulations, off-road diesel fuel used in California must meet the same sulfur and additional standards as on-road diesel fuel. Accordingly, SO_2-related issues due to diesel exhaust would be minimal.

The maximum amount of construction-related emissions during a peak construction day is presented in Table 5.1 (model data are provided in Appendix A). The PM_{10} and $PM_{2.5}$ emissions assume a 50 percent control of fugitive dust as a result of watering and associated dust-control measures. The emissions presented below are based on the best information available at the time of calculations. The proposed project is anticipated to take approximately 16 months to construct beginning in 2019. Caltrans Standard Specifications for construction (Section 14-9.03 [Dust Control] and Section 14-9.02 [Air Pollution Control]) will be adhered to in order to reduce emissions generated by construction equipment. Additionally, the SCAQMD has established Rule 403 for reducing fugitive dust emissions. The best available control measures (BACM), as specified in SCAQMD Rule 403, shall be incorporated into the proposed project commitments. With the implementation of standard construction measures (providing 50 percent effectiveness) such as frequent watering (e.g., minimum twice per day) and Measures AQ-1 through AQ-5 (see Chapter 6), fugitive dust and exhaust emissions from construction activities would not result in any adverse air quality impacts.

Table 5.1: Maximum Project Construction Emissions

Project Phases	ROG	CO	NO_X	Total PM_{10}	Total $PM_{2.5}$
Grubbing/Land Clearing (lbs/day)	1.04	6.99	12.44	3.02	0.98
Grading/Excavation (lbs/day)	6.96	44.18	78.77	6.17	3.83
Drainage/Utilities/Sub-Grade (lbs/day)	5.18	38.03	50.34	5.31	3.13
Paving (lbs/day)	1.55	14.08	21.56	1.01	0.82
Maximum (lbs/day)	6.96	44.18	78.77	6.17	3.83

Source: Compiled by LSA (April 2017).

CO = carbon monoxide
lbs/day = pounds per day
NO_X = oxides of nitrogen
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic gases

5.1.1 Naturally Occurring Asbestos

The proposed project is located in the County of Riverside, which is not among the counties listed as containing serpentine and ultramafic rock. Therefore, the impact from naturally occurring asbestos during project construction would be minimal to none.

5.2 Carbon Monoxide Screening Analysis

The methodology required for a CO local analysis is summarized in the Caltrans Transportation Project-Level Carbon Monoxide Protocol (Protocol), Section 3 (Determination of Project Requirements) and Section 4 (Local Analysis). In Section 3, the Protocol provides two conformity requirement decision flowcharts that are designed

to assist the project sponsors in evaluating the requirements that apply to specific projects. The flowchart in Figure 1 of the Protocol (Appendix B of this report) applies to new projects and was used in this local analysis conformity decision. Below is a step-by-step explanation of the flow chart. Each level cited is followed by a response, which in turn, determines the next applicable level of the flowchart for the proposed project. The flowchart begins with Section 3.1.1:

- **3.1.1. Is this project exempt from all emissions analyses?**
  No.

  Table 1 of the Protocol is Table 2 of Section 93.126 of 40 CFR. Section 3.1.1 is inquiring if the proposed project is exempt. Such projects appear in Table 1 of the Protocol. The Build Alternative does not appear in Table 1. Therefore, the proposed project is not exempt from all emissions analyses.

- **3.1.2. Is the project exempt from regional emissions analyses?**
  No.

  Table 2 of the Protocol is Table 3 of Section 93.127. The question is attempting to determine whether the proposed project is listed in Table 2. The proposed project is a bridge replacement and realignment project. Therefore, it is not exempt from regional emissions analysis.

- **3.1.3. Is the project locally defined as regionally significant?**
  Yes.

  As noted above, the proposed project would replace and realign the bridge and widen to four lanes. Therefore, the proposed project is regionally significant.

- **3.1.4. Is the project in a federal attainment area?**
  No.

  The proposed project is located within an attainment/maintenance area for the federal CO standard; therefore, the project is subject to a regional conformity determination.

- **3.1.5. Are there a currently conforming Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP)?**
  Yes.

Refer to Appendix C.

- **3.1.6. Is the project included in the regional emissions analysis supporting the currently conforming RTP and TIP?**

  Yes.

  The proposed project is included in the SCAG 2016 RTP and the 2015 FTIP (Project ID: RIV111203; Description: Bridge Replacement/Realignment: Replace Temescal Canyon Road two-lane bridge with a four-lane bridge over Temescal Wash).

  On May 22, 2017, two amendments to 2017 Federal Transportation Improvement Program were made to update the description for the bridge replacement and roadway realignment project:

  Project ID: RIV111203; In Lake Elsinore – Temescal Canyon Road Bridge Replacement/Realignment; Replace Temescal Canyon Road 2-lane bridge with a 4-lane bridge over Temescal Wash, 0.42 mile west of Lake Street and provide transition to a 2-lane roadway (both sides). Other improvements include construction of 706 ft of sidewalk and 8 ft class II bike lanes on each side of the bridge [Bridge No. 56C0050].

  Project ID: RIV160902; In Lake Elsinore - Construction of a new 4-lane divided roadway, realigning existing Temescal Canyon Road and replace existing 2-lane unimproved Temescal Canyon Road from Lake Street to 650 ft easterly of City's westerly boundary. Segment of this realigned road includes a 706 ft bridge funded by HBP listed separately under RIV111203.

- **3.1.7. Has the project design concept and/or scope changed significantly from that in the regional analysis?**

  No. The project design concept of a 4-lane bridge over Temescal Wash is still the same as described in the regional analysis. The construction of a new Temescal Canyon Road Bridge, and the sidewalk and 8 ft class II bicycle lanes on each side of the bridge, was expanded to include the realignment segment of the new 4-lane Temescal Canyon Road.

The proposed Build Alternative is consistent with the proposed project description in the 2016 RTP/2015 FTIP, and the 2017 FTIP.

- **3.1.9. Examine local impacts.**
  Section 3.1.9 of the flowchart directs the proposed project evaluation to Section 4 (Local Analysis) of the Protocol. This includes Figure 1.

Section 4 contains Figure 3 from the Local CO Analysis (Appendix A of this report). This flowchart is used to determine the type of CO analysis required for the Build Alternative. Below is a step-by-step explanation of the flowchart. Each level cited is followed by a response, which in turn, determines the next applicable level of the flowchart for the Build Alternative. The flowchart begins at Level 1:

- **Level 1. Is the project in a CO nonattainment area?**
  No.

  The project site is located in an area that has demonstrated attainment with the federal CO standard.

- **Level 1 (cont.). Was the area redesignated as "attainment" after the 1990 Clean Air Act?**
  Yes.

- **Level 1 (cont.). Has "continued attainment" been verified with the local Air District, if appropriate?**
  Yes.

  The Basin was designated as attainment/maintenance by the EPA on June 11, 2007. (Proceed to Level 7.)

- **Level 7. Does the project worsen air quality?**
  No.

  Because the proposed project would not meet any of the criteria discussed below, it would not potentially worsen air quality.

a. The project significantly increases the percentage of vehicles operating in cold start mode. Increasing the number of vehicles operating in cold start mode by as little as 2% should be considered potentially significant.

The percentage of vehicles operating in cold start mode is the same or lower for the bridge under study compared to those used for the intersections in the attainment plan. It is assumed that all vehicles on the Temescal Canyon Road are in a fully warmed-up mode. Therefore, this criterion is not met.

b. The project significantly increases traffic volumes. Increases in traffic volumes in excess of 5% should be considered potentially significant. Increasing the traffic volume by less than 5% may still be potentially significant if there is also a reduction in average speeds.

Based on the *Revised Traffic Assessment* (May 2017), the proposed project would increase traffic volume by 0 percent on Temescal Canyon Road in opening year 2021. Tables 5.2 and 5.3, respectively, show the 2021 and 2040 traffic volumes with and without the proposed project. Due to the AVSP developments and the traffic volumes on Temescal Canyon Road in horizon year 2040, there is no change in the percentage increase in traffic with and without the proposed project. The traffic analysis determined that the proposed project would increase the roadway capacity in the project area by 21,100 vehicles per day and would increase the average delay per vehicle by up to 40 percent. However, the traffic analysis determined that the volume to capacity (v/c) ratio improves under the Build conditions due to the widening of the bridge and adjoining roadway to four lanes. Therefore, the proposed project would not worsen air quality.

Table 5.2: 2021 Traffic Volumes

Roadway	No Build Alternative	Build Alternative	
	Total ADT/ADT Truck	Total ADT/ ADT Truck	Percent Change in Traffic
Temescal Canyon Road, west of Lake Street (bridge portion)	10,380/467	10,380/467	0.0
Temescal Canyon Road, west of Lake Street (adjoining roadway)	10,380/467	10,380/467	0.0

Source: *Revised Traffic Assessment* (May 2017).
ADT = Average Daily Traffic

Table 5.3: 2040 Traffic Volumes

Roadway	No Build Alternative	Build Alternative	
	Total ADT/ADT Truck	Total ADT/ ADT Truck	Percent Change in Traffic
Temescal Canyon Road, west of Lake Street (bridge portion)	48,400/2,178	48,400/2,178	0.0
Temescal Canyon Road, west of Lake Street (adjoining roadway)	38,500/1,733	38,500/1,733	0.0

Source: *Revised Traffic Assessment* (May 2017).
ADT = Average Daily Traffic

c. *The project worsens traffic flow. For uninterrupted roadway segments, a reduction in average speeds (within a range of 3 to 50 mph) should be regarded as worsening traffic flow. For intersection segments, a reduction in average speed or an increase in average delay should be considered as worsening traffic flow.*

As shown in Tables 5.4 and 5.5, the LOS on Temescal Canyon Road for the Build Alternative would remain the same as the No Build Alternative for Opening Year 2021 and Horizon Year 2040; however, for the Opening Year 2021, the bridge portion of Temescal Canyon Road would operate at LOS A due to the wide four-lane bridge while the adjoining roadways would operate under two lanes. Therefore, this criterion is not met.

Table 5.4: 2021 Level of Service

Roadway	No Build Alternative	Build Alternative
Temescal Canyon Road, west of Lake Street (bridge portion)	C	A
Temescal Canyon Road, west of Lake Street (adjoining roadway)	C	C

Source: *Revised Traffic Assessment* (May 2017).

Table 5.5: 2040 Level of Service

Roadway	No Build Alternative	Build Alternative
Temescal Canyon Road, west of Lake Street (bridge portion)	F	F
Temescal Canyon Road, west of Lake Street (adjoining roadway)	F	F

Source: *Revised Traffic Assessment* (May 2017).

The proposed project is not expected to result in any concentrations exceeding the 1-hour or 8-hour CO standards. Additionally, the project would not result in higher CO

concentrations than those existing within the region at the time of attainment demonstration. Therefore, a detailed CALINE4 CO hot-spot analysis is not required.

5.3 $PM_{2.5}$/PM_{10} Hot-Spot Analysis

The proposed project is within a nonattainment area for federal $PM_{2.5}$ and within an attainment/maintenance area for federal PM_{10} standards. Therefore, per 40 CFR, Part 93, analyses are required for conformity purposes. However, the EPA does not require hot-spot analyses, qualitative or quantitative, for projects that are not listed in Section 93.123(b)(1) as an air quality concern. The proposed project does not qualify as a project of air quality concern (POAQC) because of the following reasons:

1. **New or expanded highway projects that have a significant number of or significant increase in diesel vehicles.** The proposed project is not a new or expanded highway project. The proposed project is a bridge reconstruction and realignment project (Temescal Canyon Road Bridge) that would increase the future capacity of the Temescal Canyon Road. This type of project improves the roadway operations by reducing traffic congestion and accommodating the new vehicle operations from the City-approved Alberhill Village development project. According to the *Revised Traffic Assessment* for the Temescal Canyon Wash Bridge Project (LLG May 5, 2017), the proposed Build Alternatives during opening year 2021 would increase the capacity of Temescal Canyon Road from 13,000 to 34,100 average daily trips. However, the traffic volumes would not exceed the 125,000 average daily trips criteria for a POAQC. In addition, the total truck percentages along Temescal Canyon Road would not exceed the 8 percent criteria, and the total truck average annual daily traffic (AADT) would not exceed the 10,000-vehicle criteria for POAQC. The future traffic volumes along Temescal Canyon Road are between 38,500 and 48,400 ADT, shown in previously referenced Table 5.3. These increases would not exceed the 125,000 average daily trips or 10,000 truck trip criteria for a POAQC.

2. **Projects affecting intersections that are at LOS D, E, or F with a significant number of diesel vehicles or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project**. The proposed project does not affect intersections that are at LOS D, E, or F with a significant number of diesel vehicles. Based on the *Revised Traffic Assessment*, the proposed Build Alternatives would reduce the delay and improve the LOS at intersections within the project vicinity. The proposed project does not affect intersections that are at LOS D, E, or F with a significant number of diesel vehicles.

3. **New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.** The proposed project does not include the construction of a new bus or rail terminal.

4. **Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.** The proposed project does not expand an existing bus or rail terminal.

5. **Projects in or affecting locations, areas, or categories of sites that are identified in the $PM_{2.5}$ or PM_{10} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.** The proposed project is not in or affecting locations, areas, or categories of sites that are identified in the $PM_{2.5}$ and PM_{10} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The discussion provided above indicates that the proposed project would not be considered a Project of Air Quality Concern, as defined by 40 CFR 93.123(b)(1). Therefore, $PM_{2.5}$ and PM_{10} hot-spot evaluations are not required. It is unlikely that the proposed project would generate new air quality violations, worsen existing violations, or delay attainment of NAAQS for $PM_{2.5}$ and PM_{10}.

The project-level PM hot-spot analysis was presented to SCAG's Transportation Conformity Working Group (TCWG) for discussion and review on May 23, 2017. Per Caltrans Headquarters policy, all nonexempt projects must go through review by the TCWG. This project was approved and concurred upon by Interagency Consultation at the TCWG meeting as a project not having adverse impacts on air quality, and it meets the requirements of the CAA and 40 CFR 93.116. A copy of the TCWG finding is included in Appendix D.

5.4 Qualitative Project-Level Mobile Source Air Toxics Discussion

In addition to the criteria air pollutants for which there are NAAQS, the EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

Controlling air toxic emissions became a national priority with the passage of the CAA Amendments of 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in its

latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Volume 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in its Integrated Risk Information System. In addition, the EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from its 1999 National Air Toxics Assessment (NATA). These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (Diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While the FHWA considers these seven compounds to be the priority mobile source air toxics (MSAT), the list is subject to change and may be adjusted in consideration of future EPA rules.

The 2007 EPA rule detailed above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines.

Based on an FHWA analysis using EPA's MOVES2010b Model, as shown in Figure 2, even if VMT increases by 102 percent as assumed from 2010 to 2050, a combined reduction of 83 percent in the total annual emissions for the priority MSAT is projected for the same time period. The projected reduction in MSAT emissions would be slightly different in California due to the use of the EMFAC emission model in place of the MOVES model.

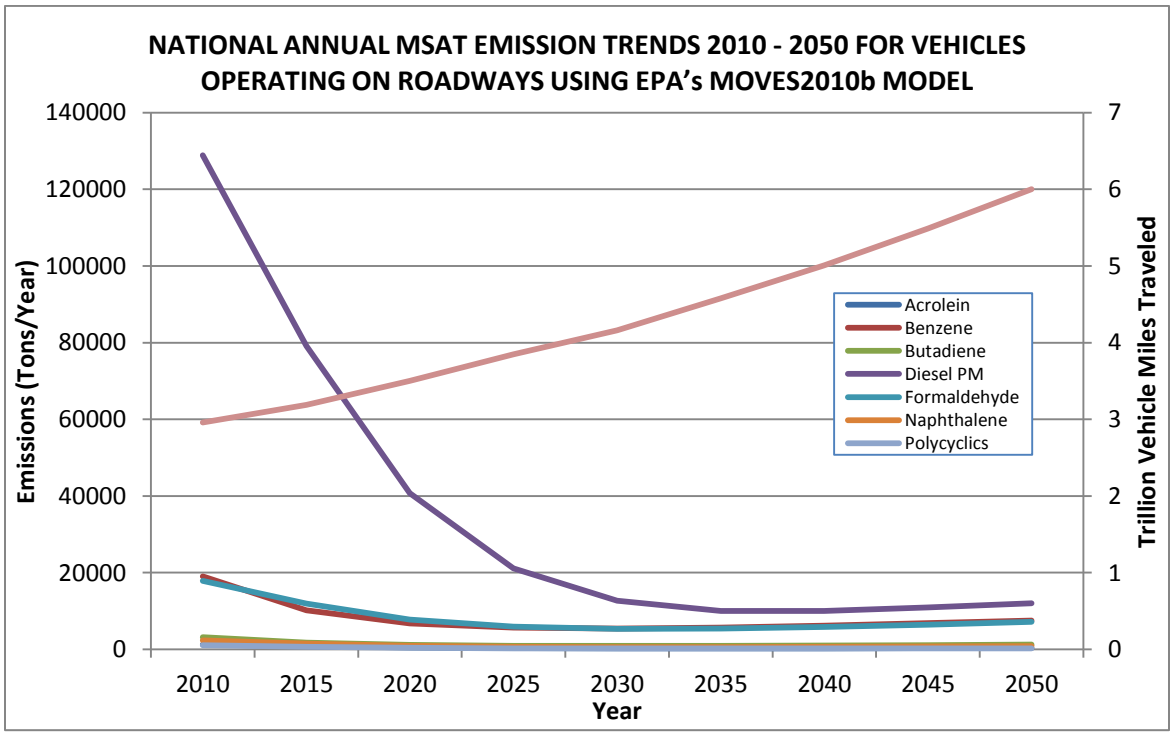


Figure 3: National MSAT Emission Trends

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making within the context of the National Environmental Policy Act (NEPA).

Nonetheless, air toxics concerns continue to be raised regarding highway projects during the NEPA process. Even as the science emerges, we are duly expected by the public and other agencies to address MSAT impacts in our environmental documents. The FHWA, the EPA, the Health Effects Institute, and others have funded and conducted research studies in order to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this field.

NEPA requires, to the fullest extent possible, that the policies, regulations, and laws of the federal government be interpreted and administered in accordance with its environmental protection goals. NEPA also requires federal agencies to use an interdisciplinary approach in planning and decision-making for any action that adversely affects the environment. NEPA requires, and the FHWA is committed to, the examination and avoidance of potential impacts to the natural and human environment when considering approval of proposed transportation projects. In addition to evaluating the potential environmental effects, we must also take into account the need for safe and efficient transportation in reaching a decision that is in the best overall public interest. The FHWA policies and procedures for implementing NEPA are contained in regulations at 23 CFR Part 771.

In October 2016, the FHWA issued the latest guidance to advise FHWA division offices as to when and how to analyze MSATs in the NEPA process for highways. That document is an update to the guidance released in February 2006, September 2009, and December 2012. The guidance is described as interim because MSAT science is still evolving. As the science progresses, the FHWA will update the guidance. This analysis follows the FHWA guidance released in October 2016.

5.4.1 Information that is Unavailable or Incomplete

In the FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a

proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. It is the lead authority for administering the CAA and its amendments and has specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. It maintains the Integrated Risk Information System, which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects." Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute. Two Health Effects Institute studies are summarized in Appendix D of the FHWA's *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents*. Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious are the adverse human health effects of MSAT compounds at current environmental concentrations or in the future as vehicle emissions substantially decrease.

The methodologies for forecasting health impacts include emissions modeling, dispersion modeling, exposure modeling, and then final determination of health impacts; each step in the process builds on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70-year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually

exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by the Health Effects Institute. As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA and the Health Effects Institute have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the CAA to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires the EPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the United States Court of Appeals for the District of Columbia Circuit upheld the EPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision-makers, who would need to weigh this information against project benefits such as reducing traffic congestion, accident rates, and fatalities, plus improved access for emergency response, as these benefits are better suited for quantitative analysis.

5.4.2 MSAT Analysis Methodology

Depending on the specific project circumstances, the FHWA has identified three levels of analysis.

(1) Projects with No Meaningful Potential MSAT Effects, or Exempt Projects

The types of projects in this category include the following:

- Projects qualifying as a Categorical Exclusion under 23 CFR 771.117(c) (subject to consideration whether unusual circumstances exist under 23 CFR 771.117(b));
- Projects exempt under the Clean Air Act conformity rule under 40 CFR 93.126; or
- Other projects with no meaningful impacts on traffic volumes or vehicle mix.

For projects that are categorically excluded under 23 CFR 771.117(c), or that are exempt from conformity requirements under the CAA pursuant to 40 CFR 93.126, no analysis or discussion of MSAT is necessary. Documentation sufficient to demonstrate that the project qualifies as a Categorical Exclusion and/or exempt project will suffice. For other projects with no or negligible traffic impacts, regardless of the class of NEPA environmental document, no MSAT analysis is recommended. However, the project record should document the basis for the determination of "no meaningful potential impacts" with a brief description of the factors considered.

(2) Projects with Low Potential MSAT Effects

The types of projects included in this category are those that serve to improve operations of highway, transit, or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase MSAT emissions. This category covers a broad range of projects.

It is anticipated that most highway projects that need an MSAT assessment will fall into this category. Any projects not meeting the criteria in Category (1) or Category (3) below should be included in this category. Examples of these types of projects are minor widening projects; new interchanges or replacement of a signalized intersection on a surface street; or projects in which design year traffic is projected to be less than 140,000 to 150,000 annual average daily traffic (AADT).

For these projects, a qualitative assessment of emissions projections should be conducted. This qualitative assessment would compare, in narrative form, the expected effect of the project on traffic volumes, vehicle mix, or routing of traffic and

the associated changes in MSAT for the project alternatives, including the No Build Alternative, based on VMT, vehicle mix, and speed. It would also discuss national trend data projecting substantial overall reductions in emissions due to stricter engine and fuel regulations issued by the EPA. Because the emission effects of these projects are typically low, it is expected that there would be no appreciable difference in overall MSAT emissions among the various alternatives.

(3) Projects with Higher Potential MSAT Effects

This category includes projects that have the potential for meaningful differences in MSAT emissions among project alternatives. It is expected that a limited number of projects would meet this two-pronged test. To fall into this category, a project should:

- Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter in a single location, involving a significant number of diesel vehicles for new projects or accommodating a significant increase in the number of diesel vehicles for expansion projects; or
- Create new capacity or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes for which the AADT is projected to be in the range of 140,000 to 150,000 or greater by the design year.

The project should also be:

- Proposed to be located in proximity to populated areas.

Projects in this category should be more rigorously assessed for impacts. For these projects, a quantitative assessment of emissions projections should be conducted. This approach would include a quantitative analysis to forecast local-specific emission trends of the priority MSAT for each alternative for use as a basis of comparison.

The *Updated Traffic Assessment Memorandum* (May 2017), determined that the Build Alternative would increase the average vehicle speeds in the project area by 2–4 mph and would decrease the average delay per vehicle by up to 20 percent. In addition, as shown in previously referenced Tables 5.2 and 5.3, the net increase in daily trips would be zero in 2021 and 2040. Project improvements would have no meaningful impacts on traffic volumes or vehicle mix. The proposed project is considered a project with low potential for meaningful MSAT effects. The Build Alternative would not result in any meaningful

changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the No Build Alternative. Caltrans has determined that the proposed project would generate minimal air quality impacts for CAA criteria pollutants and has not been linked with any special MSAT concerns. Consequently, the proposed project is exempt from analysis for MSATs.

5.5 Air Quality Management Plan Consistency Analysis

An AQMP describes air pollution control strategies to be taken by counties or regions classified as nonattainment areas. The AQMP's main purpose is to bring the area into compliance with the requirements of federal and State air quality standards. The AQMP uses the assumptions and projections by local planning agencies to determine control strategies for regional compliance status. Therefore, any projects causing a significant impact on air quality would impede the progress of the AQMP. For a project in the Basin to be consistent with the AQMP, the pollutants it emits must not exceed the SCAQMD significance threshold or cause a significant impact on air quality. If feasible mitigation measures can be implemented to reduce the project's impact level from significant to less than significant under CEQA, the project is considered to be consistent with the AQMP.

A consistency analysis determination plays an essential role in local agency project review by linking local planning and unique individual projects to the AQMP in the following ways: it fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a planning stage early enough to ensure that air quality concerns are fully addressed, and it provides the local agency with ongoing information, assuring local decision-makers that they are making real contributions to clean air goals defined in the most current AQMP (adopted in March 2017). Because the AQMP is based on projections from local General Plans, projects consistent with the local General Plan are considered consistent with the AQMP.

Air quality models are used to demonstrate that the project's emissions will not contribute to the deterioration or impede the progress of air quality goals stated in the AQMP. The air quality models use project-specific data to estimate the quantity of pollutants generated from the implementation of a project. The results for the no project and the proposed project scenarios in the horizon year are compared to the AQMP's air quality projections.

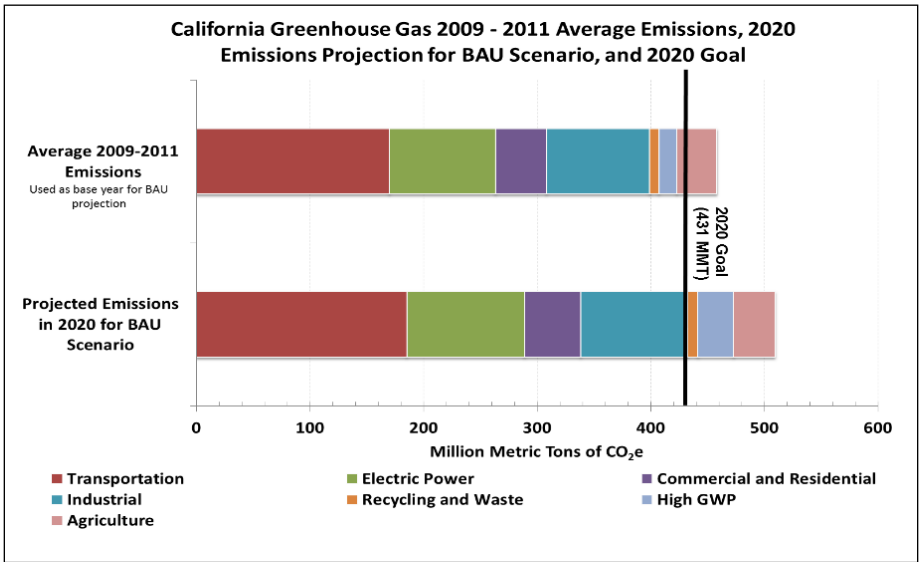
As shown above, the proposed project would not substantially contribute to or cause deterioration of existing air quality; therefore, mitigation measures are not required for the

long-term operation of the project. Hence, the proposed project is considered to be consistent with the General Plans for the City of Lake Elsinore and the County of Riverside, as well as with the SCAG forecast, and is, therefore, consistent with the AQMP.

5.6 Climate Change/GHGs

An individual project does not generate enough GHG emissions to influence global climate change significantly. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines Sections 15064(h)(1) and 15130. To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 $MMTCO_2e$ total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 $MMTCO_2e$.



Source: California Air Resources Board. Website: http://www.arb.ca.gov/cc/inventory/data/bau.htm.

Figure 4: 2020 Business as Usual (BAU) Emissions Projection 2014 Edition

Four primary strategies can reduce GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity), (3) transitioning to lower GHG-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective all four strategies should be pursued concurrently.

FHWA supports these strategies to lessen climate change impacts and correlate with efforts that the state of California is undertaking to reduce GHG emissions from the transportation sector.

One of the main strategies in the Caltrans *Climate Action Program* to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of CO_2 from mobile sources, such as automobiles, occur at stop-and-go speeds (0–25 mph) and speeds over 55 mph; the most severe emissions occur from 0–25 mph (see Figure 4). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors, GHG emissions, particularly CO_2, may be reduced.

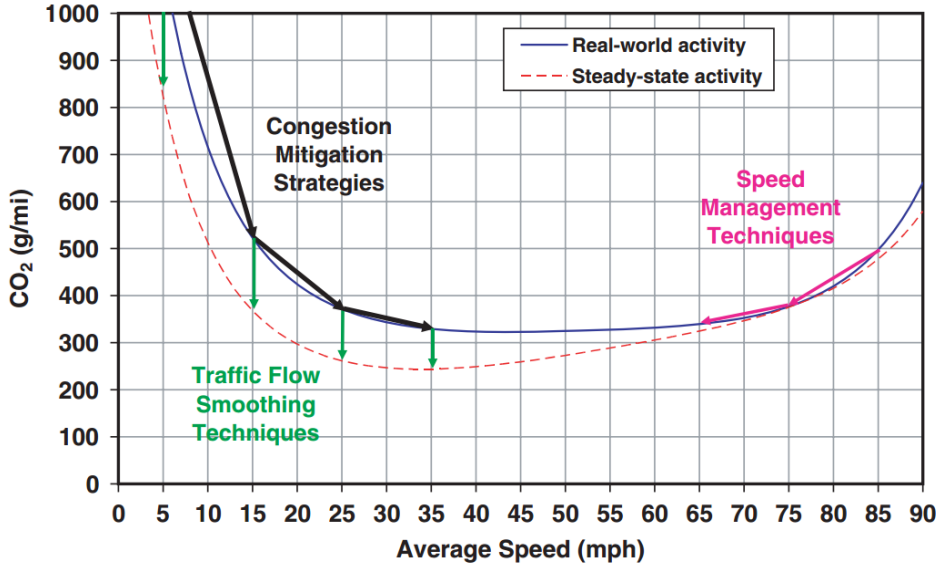


Figure 5: Possible Use of Traffic Operation Strategies in Reducing On-Road CO_2 Emissions[1]

[1] Transportation Research Board. *Traffic Congestion and Greenhouse Gases*: Matthew Barth and Kanok Boriboonsomsin (TR News 268 May–June 2010). Website: http://onlinepubs.trb.org/onlinepubs/trnews/trnews268.pdf.

5.6.1 Project Operational Emissions

As indicated in previously referenced Tables 5.2 and 5.3, the proposed project would increase traffic volumes on Temescal Canyon Road and would be less than 50,000 daily trips. Therefore, the proposed project alternative would not subtantially alter the long-term GHG emissions.

5.6.2 Project Construction Emissions

GHG emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Using the same Roadway Construction Model for the criteria pollutants in Section 5.1 above, the maximum amount of construction-related GHG emissions generated would be approximately 986 metric tons for the total construction period.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. As discussed in Chapter 6, idling times would be restricted to 10 minutes in each direction for passenger cars during lane closures and 5 minutes for construction vehicles. The restriction of idling times reduces harmful emissions from passenger cars and diesel-powered construction vehicles.

5.6.3 Greenhouse Gas Reduction Strategies

5.6.3.1 Statewide Efforts

In an effort to further the vision of California's GHG reduction targets outlined an AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing

from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, Safeguarding California.

Figure 6 presents the climate change strategy pillars.

Figure 6: Climate Change Pillars: 2030 GHG Reduction Goals

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of Governor Brown's key pillars sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

5.6.3.2 Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set a new interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

Caltrans Strategic Management Plan

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT per capita
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in *Caltrans Activities to Address Climate Change* (2013).

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.

5.6.4 Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.

5.6.4.1 Federal Efforts

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011, outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as fresh water, and providing accessible climate information and tools to help decision-makers manage climate risks.

In February 2013, federal agencies released their first-ever Climate Change Adaptation Plans, outlining strategies to reduce the vulnerability of federal programs, assets, and investments to the impacts of climate change, such as sea-level rise or more frequent or severe extreme weather. Agency plans highlight actions to plan for and address these impacts in their programs and operations.

President Obama signed Executive Order 13653 on November 1, 2013 to direct federal agencies to take a series of steps to make it easier for American communities to strengthen their resilience to extreme weather and prepare for other impacts of climate change. The Executive Order instructs agencies to modernize federal programs to support climate-resilient investments; plan for climate change-related risks to federal facilities, operations, and programs; and provide the information, data, and tools that state, local, and private-sector leaders need to make smart decisions to improve preparedness and resilience.

On December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*). This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation's transportation systems.

5.6.4.2 State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California's vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (Sea-Level Rise Assessment Report) was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to state infrastructure (such as

roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO-S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed *The California Climate Adaptation Strategy* (Dec 2009), which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across state agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan).

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring state agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how state agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance), produced by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided "guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California," specifically, "information and recommendations to enhance consistency across agencies in their development of approaches to SLR." The March 2013 update finalizes the SLR Guidance by incorporating findings of the National Academy's 2012 final Sea-Level Rise Assessment Report; the policy recommendations remain the same as those in the 2010 interim SLR Guidance. The guidance will be updated as necessary in the future to reflect the latest scientific understanding of how the climate is changing and how this change may affect the rates of SLR.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in in working towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

The proposed project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

5.7 Conformity Analysis

Conformity determinations require the analysis of direct and indirect emissions associated with the proposed project and their comparison to the without project condition. If the total of direct and indirect emissions from the project reaches or exceeds the regionally significant thresholds, the Lead Agency must perform a conformity determination to demonstrate the positive conformity of the federal action.

The project is in the 2016 Regional Transportation Plan (RTP), which was found to be conforming by the FHWA/Federal Transit Administration (FTA) on June 1, 2016. The project is also in the 2015 Federal Transportation Improvement Program (FTIP), which was found to be conforming by the FHWA/FTA on December 15, 2014 (Project ID: RIV111203; Description: Bridge Replacement/Realignment: Replace Temescal Canyon Road two-lane bridge with a four-lane bridge over Temescal Wash). The Build Alternative is consistent with the scope of design concept of the FTIP. Therefore, the proposed project is in conformance with the State Implementation Plan (SIP). The project will also comply with all SCAQMD requirements. The 2016 RTP and 2017 FTIP listings are included in Appendix C.

5.8 Cumulative Impacts Relating to Air Quality

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from vehicular traffic that can travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and, when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for a project's air quality analysis must be regional by nature.

Construction and operation of cumulative projects would further degrade the local air quality, as well as the air quality of the Basin. Air quality would be temporarily degraded during construction activities that occur separately or simultaneously.

However, the greatest potential for a cumulative impact on the regional air quality would be the incremental addition of pollutants from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks

associated with construction of these projects. The proposed project is a transportation improvement and not a direct trip generator.

With respect to operational emissions that may contribute to exceeding State and federal standards, a CO and $PM_{2.5}/PM_{10}$ screening analysis was performed. The results of this analysis illustrate that localized levels would not violate air quality standards and, therefore, do not present an adverse cumulative impact. In addition, due to the proposed project's relatively small scale, the contribution to the Basin air pollutant emissions is not cumulatively considerable.

Chapter 6 Minimization Measures

The following measures will be implemented during construction activities.

AQ-1 During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions will be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District (SCAQMD) Rule 403. All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on site or off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust. The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. These control techniques will be indicated in project specifications. Visible dust beyond the property line emanating from the project will be prevented to the maximum extent feasible.

AQ-2 Project grading plans will show the duration of construction. Ozone precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications.

AQ-3 All trucks that are to haul excavated or graded material on site will comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4), as amended, regarding the prevention of such material spilling onto public streets and roads.

AQ-4 The contractor will adhere to the California Department of Transportation (Caltrans) Standard Specifications for Construction (Sections 14.9-02 and 14-9.03).

AQ-5 All construction vehicles both on- and off-site shall be prohibited from idling in excess of 10 minutes.

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Appendix A Construction Emission Calculations

Contents: Road Construction Emission Model Printouts

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Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for -> Temescal Canyon Bridge Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.97	6.83	11.47	2.98	0.48	2.50	0.94	0.42	0.52	0.02	1,654.70	0.42	0.02	1,670.90
Grading/Excavation	6.38	42.30	71.61	5.78	3.28	2.50	3.48	2.96	0.52	0.09	9,096.52	2.55	0.09	9,186.97
Drainage/Utilities/Sub-Grade	4.71	36.79	45.86	4.99	2.49	2.50	2.82	2.30	0.52	0.06	6,142.61	1.30	0.06	6,192.86
Paving	1.40	13.78	19.04	0.90	0.90	0.00	0.72	0.72	0.00	0.05	4,859.41	0.57	0.12	4,908.13
Maximum (pounds/day)	6.38	42.30	71.61	5.78	3.28	2.50	3.48	2.96	0.52	0.09	9,096.52	2.55	0.12	9,186.97
Total (tons/construction project)	0.68	5.09	7.36	0.68	0.36	0.32	0.39	0.33	0.07	0.01	1,076.48	0.24	0.01	1,086.50

Notes:

Project Start Year ->	2019
Project Length (months) ->	16
Total Project Area (acres) ->	1
Maximum Area Disturbed/Day (acres) ->	0
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	200	40
Grading/Excavation	0	0	0	0	1,120	40
Drainage/Utilities/Sub-Grade	0	0	0	0	720	40
Paving	0	200	0	750	320	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Temescal Canyon Bridge Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.02	0.12	0.20	0.05	0.01	0.04	0.02	0.01	0.01	0.00	29.12	0.01	0.00	26.68
Grading/Excavation	0.29	1.95	3.31	0.27	0.15	0.12	0.16	0.14	0.02	0.00	420.26	0.12	0.00	385.05
Drainage/Utilities/Sub-Grade	0.30	2.35	2.93	0.32	0.16	0.16	0.18	0.15	0.03	0.00	391.90	0.08	0.00	358.44
Paving	0.07	0.67	0.92	0.04	0.04	0.00	0.03	0.03	0.00	0.00	235.20	0.03	0.01	215.51
Maximum (tons/phase)	0.30	2.35	3.31	0.32	0.16	0.16	0.18	0.15	0.03	0.00	420.26	0.12	0.01	385.05
Total (tons/construction project)	0.68	5.09	7.36	0.68	0.36	0.32	0.39	0.33	0.07	0.01	1076.48	0.24	0.01	985.67

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

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Appendix B CO Protocol

Contents: Highlighted CO Protocol Flowcharts

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Flowcharts (Sheet 1 of 4)

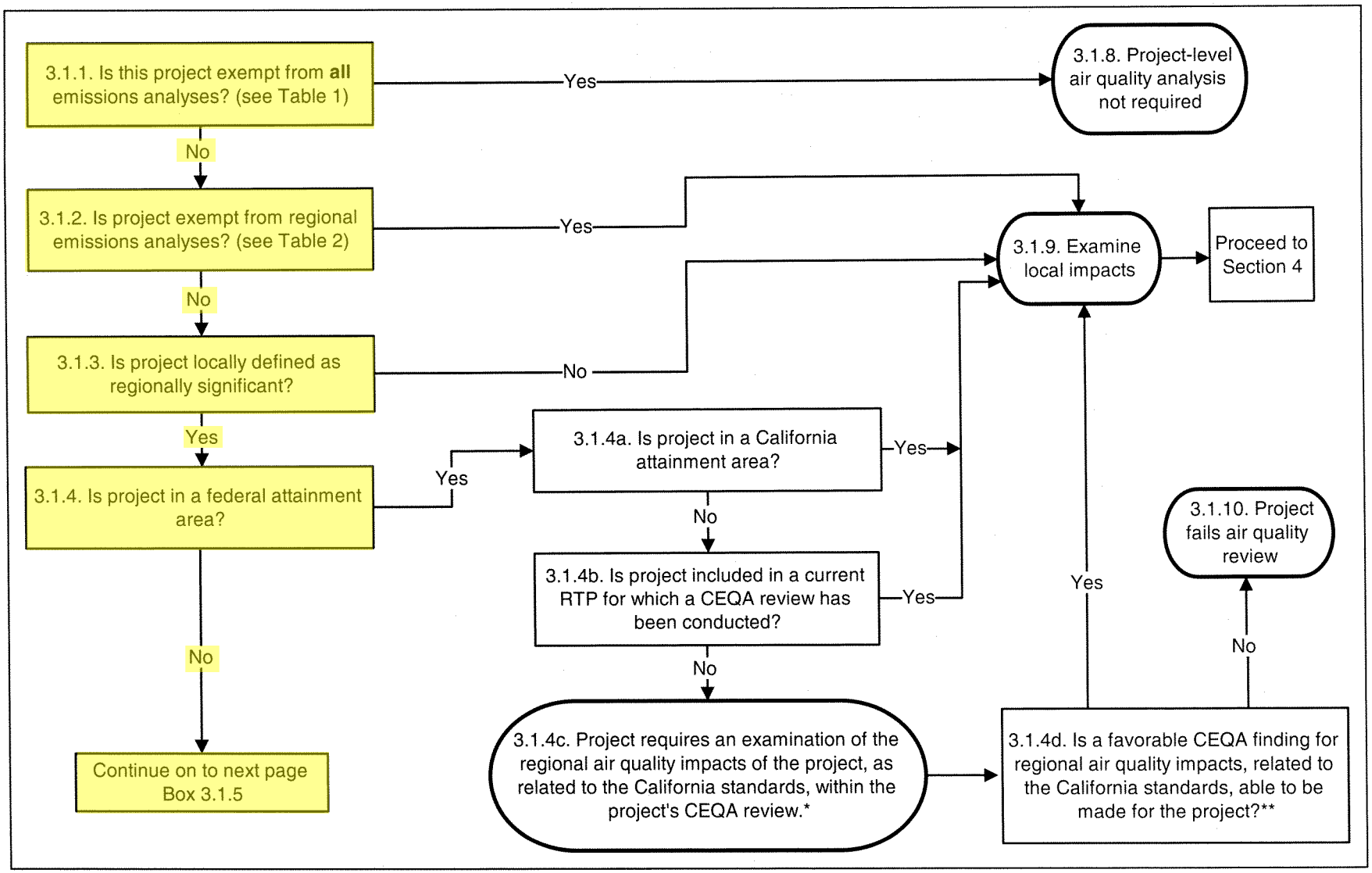

Figure 1. Requirements for New Projects

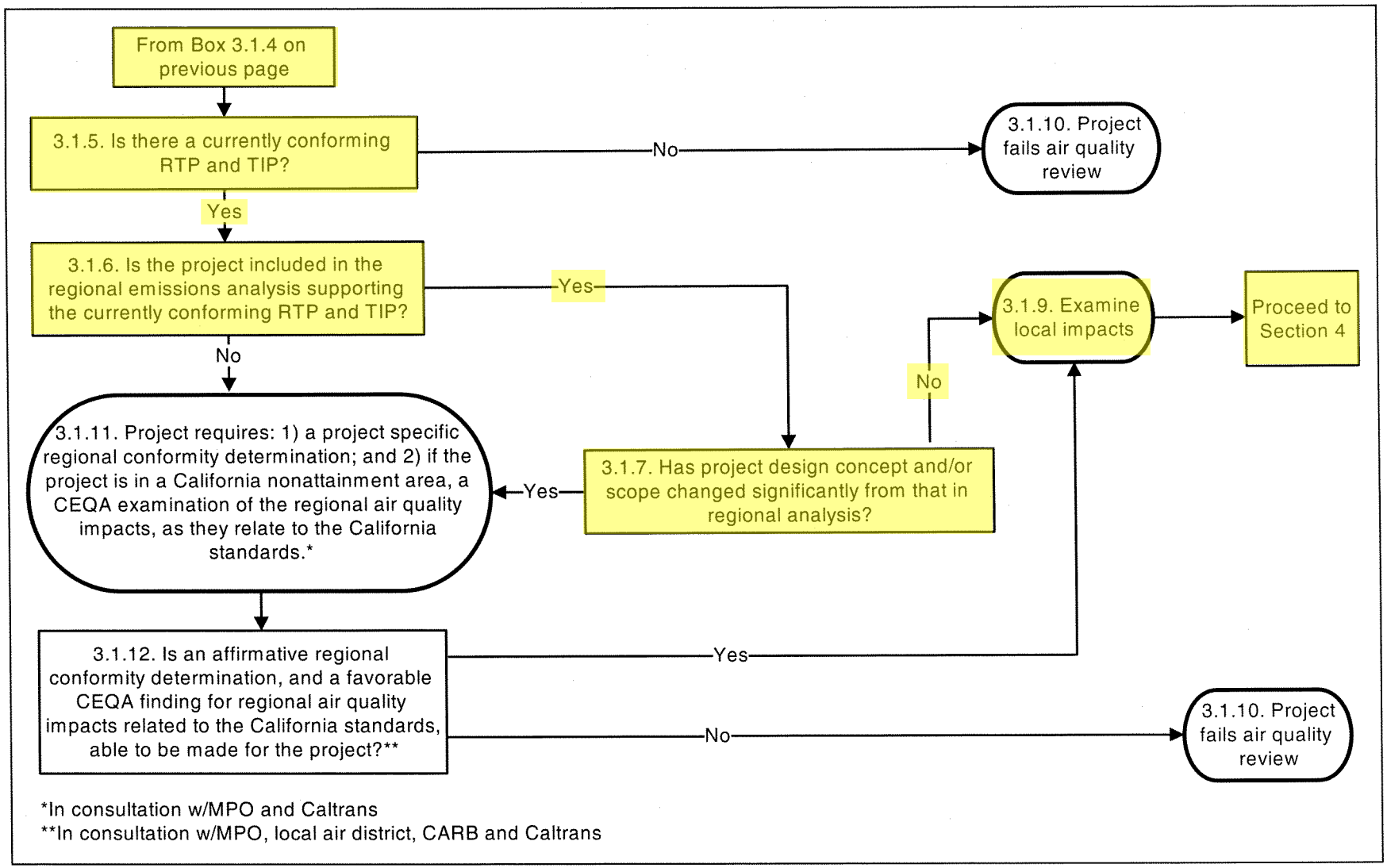

Figure 1 (cont.). Requirements for New Projects

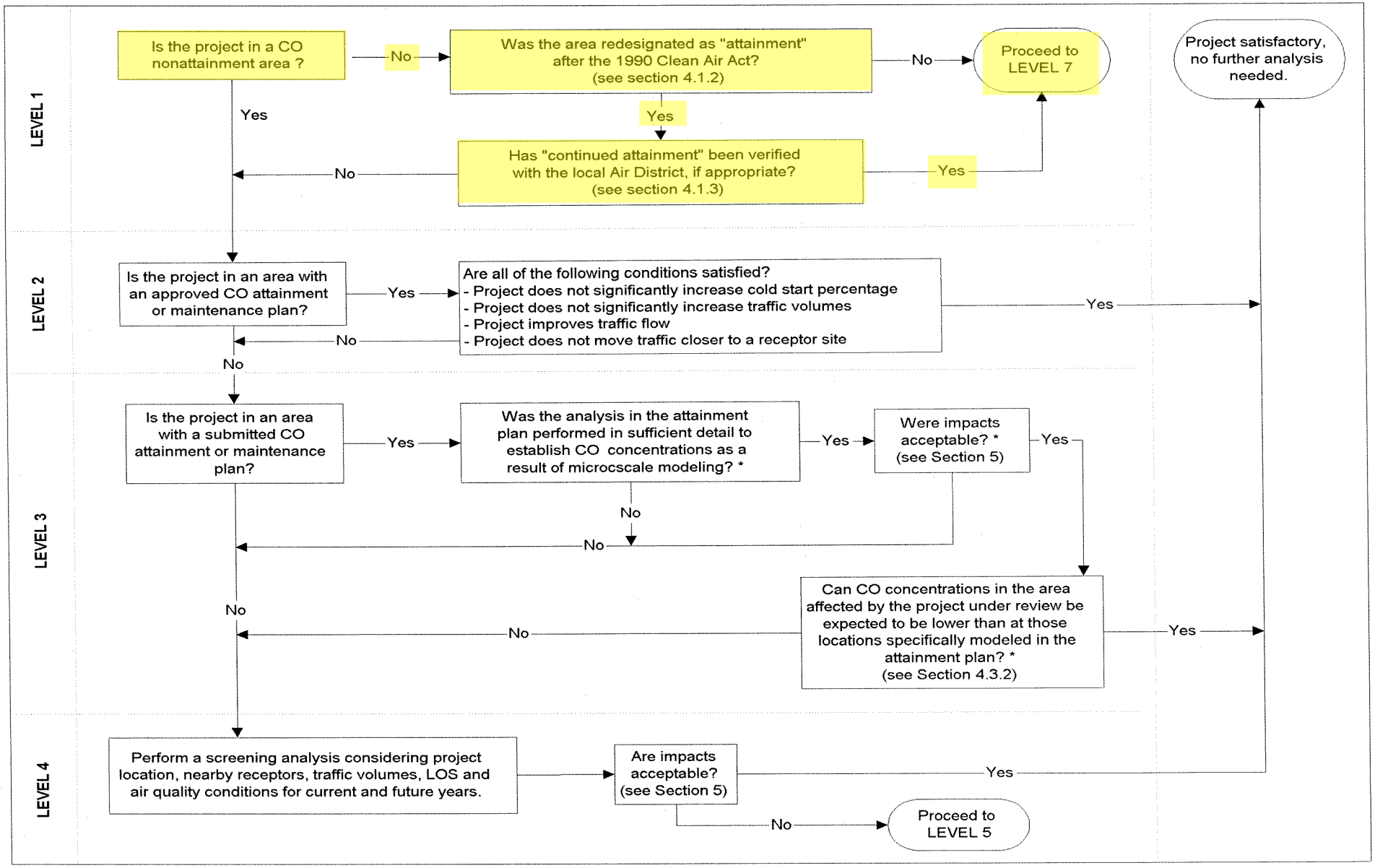

Figure 3. Local CO Analysis

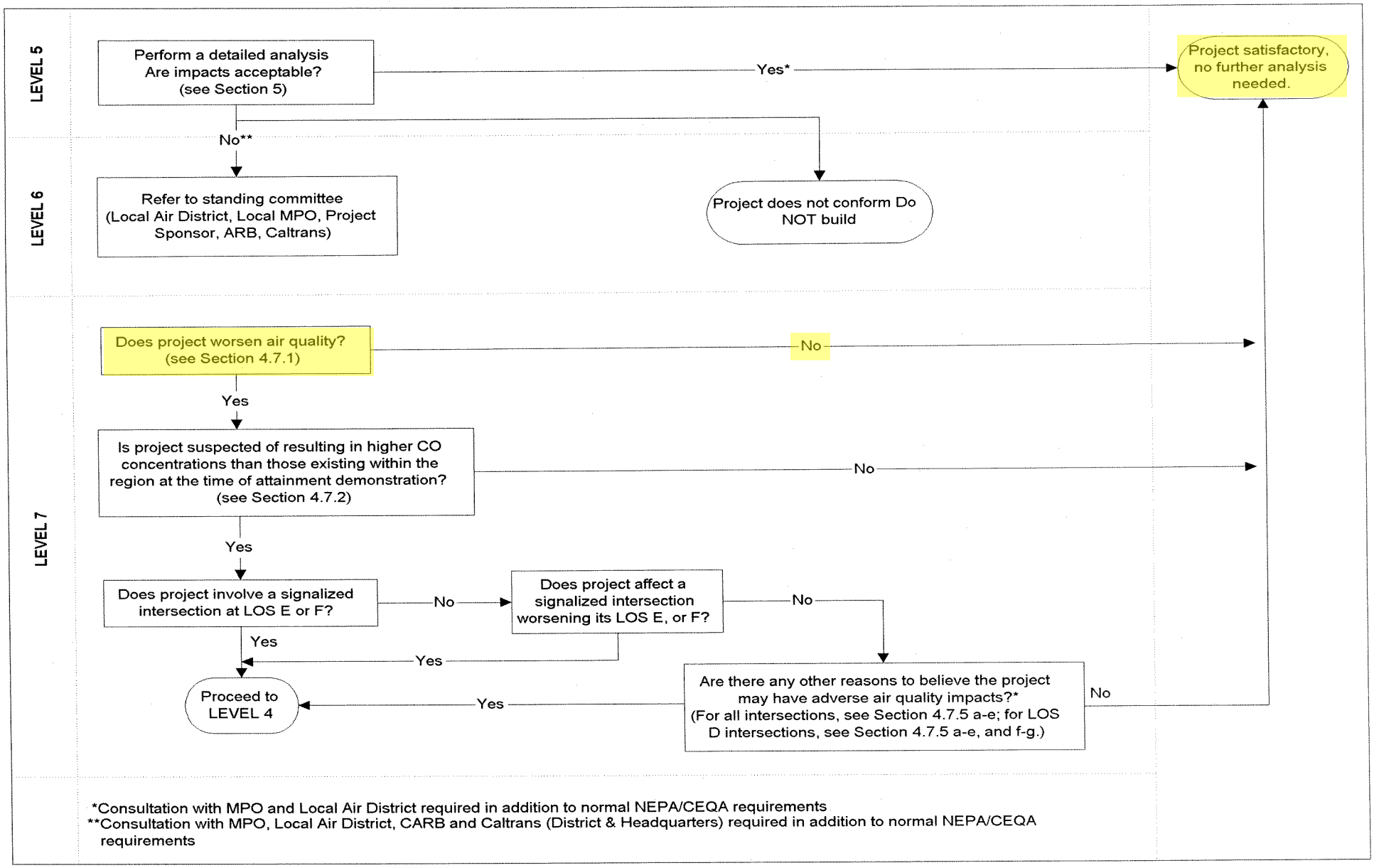

Figure 3 (cont.). Local CO Analysis

Appendix C 2016 RTP and 2017 FTIP Project Listings

Contents: 2016 Regional Transportation Plan Project Listing
2017 Federal Transportation Improvement Program Project Listing

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TABLE 1 FTIP Projects - Continued

County	System	FTIP ID	Route #	Description	Project Cost ($1,000's)
RIVERSIDE	LOCAL HIGHWAY	RIV091006	0	IN EASTERN RIVERSIDE CO. IN THE COACHELLA VALLEY - HWY 111 WIDENING W/IN INDIAN WELLS CITY LIMITS: WID FROM 4 TO 6 THRU LNS (3 LNS IN EA DIR) BTWN THE WCL (570' W/O VILLAGE CTR DR) & EL DORADO DR (RTP ID'S 3A07316 & 3A07257) INCLUDING THE INSTAL OF A RAISED, LANDSCAPE MEDIAN, LEFT TURN PH @ EL DORADO DR, DUAL LEFT TURN PH @ THE SB AND EB COOK ST, RT TURN ONLY LNS AT THE EAST, WEST, AND SB COOK ST.	$27,788
RIVERSIDE	LOCAL HIGHWAY	RIV091209	0	IN EASTERN RIVERSIDE CO. IN THE COACHELLA VALLEY - HWY 111 WIDENING WITHIN INDIAN WELLS CITY LIMITS: WIDENING FROM 4 TO 6 THRU LNS (3 LNS IN EA DIR) BTWN EL DORADO & EAST CITY LIMITS (W/O WASHINGTON), INCLUDING THE INSTALL OF A RAISED, LANDSCAPE MEDIAN AND RIGHT TURN ONLY LANE AT INDIAN WELLS LN (RTP ID'S 3A07258 & 3A07259).	$32,779
RIVERSIDE	LOCAL HIGHWAY	RIV091208	0	IN COACHELLA VALLEY IN THE CITY OF INDIO - JACKSON ST TRAFFIC SIGNAL INTERCONNECT AND TRAFFIC SIGNAL INSTALL: INSTALL A NEW TS AT JACKSON ST & MARKET ST/DILLON AVE., & INSTALL. OF A WIRELESS INTERCONNECT SYSTEM ON JACKSON ST BTWN AVE. 44 TO THE NO. & AVE. 45 TO THE SO., A DISTANCE OF APROX. 1 MILE. INTERCONNECT SYSTEM INCLUDES 2 EXIST. TS & 1 NEW TS ($38 TOLL CREDITS USED FOR CMAQ MATCH IN CONS).	$367
RIVERSIDE	LOCAL HIGHWAY	RIV111202	0	IN THE CITY OF INDIO - AVE 44 BRIDGE REPLACEMENT: REPLACE EXISTING AVENUE 44 TWO LANE LOW WATER CROSSING OVER THE COACHELLA VALLEY STORMWATER CHANNEL WITH A FOUR LANE BRIDGE (BRIDGE NO. 00L0056), INCLUDING 6 FT SIDEWALK ON EACH SIDE OF THE BRIDGE.	$19,230
RIVERSIDE	LOCAL HIGHWAY	RIV140819	0	IN EASTERN RIVERSIDE COUNTY FOR THE CITY OF INDIO - FULLY PAVE ABOUT ONE MILE OF UNPAVED CITY ROADS ALONG (4) RESIDENTIAL STREETS IN INDIO, NORTH OF INTERSTATE 10. STREETS TO BE REPAVED ARE: RANCHO LOS CERRITOS DR; PRIMROSE LANE; GALINDO CT; AND SABRINA CT (PM 2.5 BENEFITS 17.92 KG/DAY)	$1,279
RIVERSIDE	LOCAL HIGHWAY	RIV140848	0	IN EASTERN RIVERSIDE COUNTY IN THE CITY OF INDIO – ANDREW JACKSON ELEM PED IMPROVEMENTS: ON TEN STREETS WITHIN THE ANDREW JACKSON ELEM SCHOOL COMMUNITY, INSTALL SIDEWALKS, UPGRADE PED ACCESS RAMPS AND DRIVEWAY APPROACHES, THREE ENHANCED CROSSWALKS, AND TWO SPEED FEEDBACK SIGNS. TC USED TO MATCH ATP	$2,581
RIVERSIDE	LOCAL HIGHWAY	RIV151001	0	IN EASTERN RIVERSIDE COUNTY FOR THE CITY OF INDIO - RECONSTRUCT AND IMPROVE HIGHWAY 111 FROM 760 FT WEST OF MADISON ST TO RUBIDOUX ST INCLUDING UPDATING ALL TRAFFIC SIGNALS AND UPDATE ALL SIDEWALKS, RAMPS AND DRIVEWAYS TO CURRENT ADA STANDARDS. WIDEN OF HIGHWAY 111 FROM 4 LANES (2 IN EACH DIR) TO 6 LANES (3 IN EACH DIR).	$10,920
RIVERSIDE	LOCAL HIGHWAY	RIV121202	0	IN EASTERN RIVERSIDE COUNTY IN THE CITY OF LA QUINTA - ON DUNE PALMS RD: REPLACE 3-LANE LOW WATER CROSSING WITH 4 LANE BRIDGE OVER THE COACHELLA VALLEY STORMWATER CHANNEL (WHITEWATER RIVER - BRIDGE NO.00L0070)	$17,510
RIVERSIDE	LOCAL HIGHWAY	RIV091005	0	IN MID WESTERN RIVERSIDE COUNTY IN THE CITY OF LAKE ELSINORE - CONSTRUCTION OF A 6-PHASE TRAFFIC SIGNAL AT THE INTERSECTION OF SR-74 AND GUNNERSON AVENUE AND WIDENING OF THE ROUTE TO PROVIDE FOR TWO LEFT TURN LANES.	$2,450
RIVERSIDE	LOCAL HIGHWAY	RIV111203	0	IN LAKE ELSINORE - TEMESCAL CANYON RD BRIDGE REPLACEMENT/WIDENING: REPLACE TEMESCAL CANYON RD. 2 LANE BRIDGE WITH A 4 LANE BRIDGE OVER TEMESCAL WASH, 0.22 MI. W/O LAKE STREET (BRIDGE NO. 56C0050).	$19,452
RIVERSIDE	LOCAL HIGHWAY	RIV011210	0	IN MORENO VALLEY/COUNTY - REALIGN RECHE VISTA DR (PERRIS BLVD TO NORTH CITY LIMITS - APPROX 2,450') & INSTALL SIGNAL (PERRIS/HEACOCK/ RECHE VISTA DR)	$4,600
RIVERSIDE	LOCAL HIGHWAY	RIV071240	0	IN THE CITY OF MORENO VALLEY - EAST BOUND CACTUS AVE WIDENING BETWEEN VETERANS WAY & HEACOCK: WIDENING OF EAST BOUND CACTUS AVE FROM 2 TO 3 LANES, INCLUDING TRAFFIC SIGNAL MODIFICATIONS WITHIN THE PROJECT REACH, CHANNELIZATION, AND SIGNAL INTERCONNECT SYSTEM (6 SIGNALS).	$3,241
RIVERSIDE	LOCAL HIGHWAY	RIV080905	0	IN THE CITY OF MORENO VALLEY - WIDEN ALESSANDRO BLVD BETWEEN I-215 AND FREDERICK ST FROM 4 TO 6 LANES.	$12,401
RIVERSIDE	LOCAL HIGHWAY	RIV080907	0	IN THE CITY OF MORENO VALLEY - WIDEN ALESSANDRO BLVD BETWEEN NASON ST AND GILMAN SPRINGS RD FROM 2 TO 4 LANES; REALIGN ALESSANDRO BLVD WITHIN PROJECT LIMITS BETWEEN THEODORE ST AND GILMAN SPRINGS RD. IMPROVEMENTS INCLUDE MEDIANS, TRAFFIC SIGNALS, CHANNELIZATION, LEFT TURN POCKETS, DEDICATED RIGHT TURN, DRAINAGE, LANDSCAPING, SIDEWALKS, BIKE LANES, AND TRAILS.	$62,000
RIVERSIDE	LOCAL HIGHWAY	RIV080908	0	IN THE CITY OF MORENO VALLEY - WIDEN GILMAN SPRINGS RD BETWEEN SR-60 AND ALESSANDRO BLVD FROM 2 TO 6 LANES. IMPROVEMENTS INCLUDE MEDIANS, TRAFFIC SIGNALS, CHANNELIZATION, LEFT TURN POCKETS, DEDICATED RIGHT TURN, DRAINAGE, ACCESS ROADS, LANDSCAPING, SIDEWALKS, AND BIKE LANES.	$41,500
RIVERSIDE	LOCAL HIGHWAY	RIV080909	0	IN THE CITY OF MORENO VALLEY - WIDEN GILMAN SPRINGS RD BETWEEN ALESSANDRO BLVD AND BRIDGE ST FROM 2 TO 6 LANES. IMPROVEMENTS INCLUDE MEDIANS, TRAFFIC SIGNALS, CHANNELIZATION, LEFT TURN POCKETS, DEDICATED RIGHT TURN, DRAINAGE, ACCESS ROADS, LANDSCAPING, SIDEWALKS, AND BIKE LANES.	$51,000
RIVERSIDE	LOCAL HIGHWAY	RIV080910	0	IN THE CITY OF MORENO VALLEY - WIDEN HEACOCK ST BETWEEN CACTUS AVE AND SAN MICHELE RD FROM 2 TO 4 LANES INCLUDING CURB, GUTTER, SIDEWALK, AND SIGNAL.	$10,800

Project Sheet - RIV111203

2017 FTIP (FY 2016/2017 - FY 2021/2022)
SCAG Approved
Cost in Thousands

Project ID	RIV111203	County: Riverside		Version:	6	Amendment	3
Agency	LAKE ELSINORE						
System	L	Route				CTC Update	11/8/2016 11:08 AM
Begin PM		Conform Cat.	NON-EXEMPT			by	grace
End PM		Air Basin	SCAB			SCAG Update	11/29/2016 8:05 PM
Phase	Environmental Document/Pre-design Phase (PA&ED)					by	Gutierrez
Program Code:	CAXT1	BRIDGE RESTORATION/REPLACEMENT W/TCM: RS				RTP ID	3A04WT198
Scheduled Dates	Starting	Ending		Completion Date:		CTIPS ID	20940003969
PAED				12/30/2022		Model No.	
PS&E(ENG)				Conformity Category:		Env. Doc. Type	CE
ROW				NON-EXEMPT		Env. Doc. Date	12/29/2017
CON				Current Project Status:		Year Added	
				SCAG Approved (as of 11/29/2016 8:05:13 PM)			
Change Reason:	SCOPE CHG						
Project Description:					Project Total Cost:		17,130

IN LAKE ELSINORE - TEMESCAL CANYON RD BRIDGE REPLACEMENT/REALIGNMENT: REPLACE TEMESCAL CANYON RD. 2 LANE BRIDGE WITH A 4 LANE OVER TEMESCAL WASH, 0.42 MI. W/O LAKE STREET AND PROVIDE TRANSITION TO A 2 LANE ROADWAY (BOTH SIDES). OTHER IMPROVEMENTS INCLUDE CONS OF 706 FT OF SIDEWALK AND 8 FT CLASS II BIKE LNS ON EACH SIDE OF THE BRIDGE. (BRIDGE NO. 56C0050).

Project Sheet - RIV111203

2017 FTIP (FY 2016/2017 - FY 2021/2022)
SCAG Approved
Cost in Thousands

Fund Type	Fiscal Year	ENG	ROW	CON	Fund Total
	2012/2013	761			761
	2016/2017	223			223
	2019/2020	932			932
	2020/2021		1,077		1,077
	2021/2022			12,172	12,172
BRIDGE - LOCAL		1,916	1,077	12,172	15,165
	2012/2013	99			99
	2016/2017	29			29
	2019/2020	121			121
	2020/2021		139		139
	2021/2022			1,577	1,577
CITY FUNDS		249	139	1,577	1,965
Total		2,165	1,216	13,749	17,130

COMMENT

Amendment	Version	Comment Type	Comment	Modified By	Modifydate
3	6	Amendment	2015 FTIP - A2: Reprogramming of funds from FY 2016/17 to FY 2015/16 per 10/29/2014 HBP update	grace	11/8/2016 7:21:38 AM
3	6	general	2013 FTIP - A2: Reprogramming of funds from 2011/2012 to 2012/2013 2013 FTIP - A8: Reprogramming of funds from FY 2012/2013 to FY 2015/2016 2017 FTIP - A97: Scope change.	grace	11/8/2016 7:21:38 AM
3	6	main	2013 FTIP - New project per HBP listing dated 10/20/2011. 2015 FTIP - Carry over from 2013 FTIP with reprogramming of funds per HBP listing on 11/15/2013 2017 FTIP Update: Carry over project from 2015 FTIP with scope change, schedule delay and reprogramming of funds	grace	11/8/2016 7:21:38 AM
3	6	Modeling CTC	Sidewalk and bike lane = 706 ft (.13 miles) each direction.	grace	11/8/2016 7:21:37 AM
3	6	Status	.	grace	11/8/2016 7:21:38 AM
0	4	Amendment	2015 FTIP - A2: Reprogramming of funds from FY 2016/17 to FY 2015/16 per 10/29/2014 HBP update	eric	11/20/2015 3:19:30 PM
0	4	general	2013 FTIP - A2: Reprogramming of funds from 2011/2012 to 2012/2013 2013 FTIP - A8: Reprogramming of funds from FY 2012/2013 to FY 2015/2016	eric	11/20/2015 3:19:30 PM
0	4	main	2013 FTIP - New project per HBP listing dated 10/20/2011. 2015 FTIP - Carry over from 2013 FTIP with reprogramming of funds per HBP listing on 11/15/2013 2017 FTIP Update: Carry over project from 2015 FTIP with scope change, schedule delay and reprogramming of funds	eric	11/20/2015 3:19:30 PM

Appendix D TCWG Findings

Contents: Transportation Conformity Working Group Project Determination

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SCAG
INNOVATING FOR A BETTER TOMORROW

SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS
818 West 7th Street, 12th Floor
Los Angeles, CA 90017
T: (213) 236-1800
F: (213) 236-1825
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MEETING OF THE

TRANSPORTATION CONFORMITY WORKING GROUP

Tuesday, May 23, 2017
10:00 a.m. – 12:00 p.m.

SCAG Main Office
Policy Committee A Conference Room
818 West 7th, 12th Floor
Los Angeles, CA 90017
213.236.1800

Teleconference
Call-in Telephone: (866) 434-5269
Passcode: 357777

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact:

Rongsheng Luo at 213.236.1994 or luo@scag.ca.gov
Anita Au at 213.236.1874 or au@scag.ca.gov

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. If you require such assistance, please contact SCAG at (213) 236-1868 at least 72 hours in advance of the meeting to enable SCAG to make reasonable arrangements. To request documents related to this document in an alternative format, please contact (213) 236-1868.

Transportation Conformity Working Group

AGENDA

		PAGE #	TIME
1.0	**CALL TO ORDER AND SELF-INTRODUCTION**	**Wayne Chiou, Chair**	
2.0	**PUBLIC COMMENT PERIOD** Members of the public desiring to speak on an agenda item or items not on the agenda, but within the purview of the TCWG, must fill out a speaker's card prior to speaking and submit it to the Staff Assistant. A speaker's card must be turned in before the meeting is called to order. Comments will be limited to three minutes. The Chair may limit the total time for comments to twenty (20) minutes.		
3.0	**CONSENT CALENDAR**		
3.1	April 25, 2017 TCWG Meeting Minutes **Attachment 3.1**	3.1-1	
4.0	**INFORMATION ITEMS**		
4.1	Review of PM Hot Spot Interagency Review Forms **Attachments 4.1-1 LATP17M014; 4.1-2 SCAG015; 4.1-3 RIV071288; 4.1-4 RIV090903; 4.1-5 RIV111203**	4.1-1	30 minutes
4.2	FTIP Update	John Asuncion, SCAG	5 minutes
4.3	RTP Update	Daniel Tran, SCAG	5 minutes
4.4	EPA Update - Standing Update - Sanction Clocks Update	Karina O'Connor and Wienke Tax, EPA	10 minutes
4.5	ARB Update - Standing Update - SIP Update	Dennis Wade, ARB	10 minutes
4.6	Air Districts Update - Standing Update - AQMP/SIP Update	District Representatives	10 minutes
5.0	**INFORMATION SHARING**		5 minutes
6.0	**ADJOURNMENT** The next meeting of the Transportation Conformity Working Group will be held on Tuesday, June 27, 2017 at the SCAG office in downtown Los Angeles.		

May 2017 ×

PM Hot Spot Analysis Project Lists

Review of PM Hot Spot Interagency Review Forms

May, 2017	Determination
LATP17M014 May 2017	Not a POAQC – Hot Spot Analysis Not Required
SCAG015 May 2017	Not a POAQC – Hot Spot Analysis Not Required
RIV071288 May 2017	Not a POAQC – Hot Spot Analysis Not Required
RIV090903 May 2017	Not a POAQC – Hot Spot Analysis Not Required
RIV111203 May 2017	Not a POAQC – Hot Spot Analysis Not Required

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Appendix E Conformity Findings

Contents: Transportation Air Quality Conformity Findings Checklist

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Transportation Air Quality Conformity Findings Checklist

Project Name:	Temescal Canyon Road Bridge Replacement and Road Realignment Project
Dist-Co-Rte-PM:	8-RIV-15-27.0 **EA:**
Federal-Aid No.:	BRLS 5074(015)
Document Type:	☒ **23 USC 326 CE** ☐ **23 USC 327 CE** ☐ **EA** ☐ **EIS**

Step 1. Is the project located in a nonattainment or maintenance area for ozone, nitrogen dioxide, carbon monoxide (CO), PM2.5, or PM10 per EPA's Green Book listing of non-attainment areas?

☐ If no, go to Step 17. **Transportation conformity does not apply to the project.**

☒ If yes, go to Step 2.

Step 2. Is the project exempt from conformity per 40 CFR 93.126 or 40 CFR 93.128

☐ If yes, go to Step 17. **The project is exempt from all project-level conformity requirements (40 CFR 93.126 or 128)** (check one box below and identify the project type, if applicable).

- ☐ 40 CFR 93.126 Project type: _____
- ☐ 40 CFR 93.128

☒ If no, **go** to Step 3.

Step 3. Is the project exempt from regional conformity per 40 CFR 93.127

☐ If yes, go to Step 8. **The project is exempt from regional conformity requirements (40 CFR 93.127)** (identify the project type). Project type: _____

☒ If no, go to Step 4.

Step 4. Is the project located in a region with a currently conforming RTP and TIP?

☒ If yes, **the project is included in a currently conforming RTP and TIP per 40 CFR 93.115. The project's design and scope have not changed significantly from what was assumed in RTP conformity analysis (40 CFR 93.115[b])** Go to Step 8.

☐ If no and the project is located in an isolated rural area, go to Step 5.

☐ If no and the project is not located in an isolated rural area, STOP and do not proceed until a conforming RTP and TIP are adopted.

Step 5. For isolated rural areas, is the project regionally significant per 40 CFR 93.101, based on review by Interagency Consultation?

☐ If yes, go to Step 6.

☐ If no, go to Step 8. **The project, located in an isolated rural area, is not regionally significant and does not require a regional emissions analysis (40 CFR 93.101 and 93.109[l]).**

Step 6. Is the project included in another regional conformity analysis that meets the isolated rural area analysis requirements per 40 CFR 93.109, including Interagency Consultation and public involvement?

☐ If yes, go to Step 8. **The project, located in an isolated rural area, has met its regional analysis requirements through inclusion in a previously-approved regional conformity analysis that meets current requirements (40 CFR 93.109[l]).**

☐ If no, go to Step 7.

Step 7. The project, located in an isolated rural area, requires a separate regional emissions analysis.

☐ **Regional emissions analysis for regionally significant project, located in an isolated rural area, is complete. Regional conformity analysis was conducted that includes the project and reasonably foreseeable regionally significant projects for at least 20 years. Interagency Consultation and public participation were conducted. Based on the analysis, the interim or emission budget conformity tests applicable to the area are met (40 CFR 93.109[l] and 95.105).**[1] Go to Step 8.

Step 8. Is the project located in a CO nonattainment or maintenance area?

☒ If no, go to Step 9. **CO conformity analysis is not required.**

☐ If yes, **hot-spot analysis requirements for CO per the** CO Protocol (or per EPA's modeling guidance, CAL3QHCR can be used with EMFAC emission factors[2]) **have been met. Project will not cause or contribute to a new localized CO violation (40 CFR 93.116 and 93.123)**[3]**.** Go to Step 9.

Step 9. Is the project located in a PM10 and/or a PM2.5 nonattainment or maintenance area?

☐ If no, go to Step 13. **PM2.5/PM10 conformity analysis is not required.**

☒ If yes, go to Step 10.

---

[1] The analysis must support this conclusion before going to the next step.

[2] Use of the CO Protocol is strongly recommended due to its use of screening methods to minimize the need for modeling. When modeling is needed, the Protocol simplifies the modeling approach. Use of CAL3QHCR must follow U.S. EPA's latest CO hot spot guidance, using EMFAC instead of MOVES; see: http://www.epa.gov/otaq/stateresources/transconf/projectlevel-hotspot.htm#co-hotspot.

[3] As of October 1, 2007, there are no CO nonattainment areas in California. Therefore, the requirements to not worsen existing violations and to reduce/eliminate existing violations do not apply.

Step 10. Is the project considered to be a Project of Air Quality Concern (POAQC), as described in EPA's Transportation Conformity Guidance for PM 10 and PM 2.5?

☒ If no, **the project is not a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Analysis Guidance. Interagency Consultation concurred with this determination on May 23, 2017**. Go to Step 12.

☐ If yes, go to Step 11.

Step 11. The project is a POAQC.

☐ **The project is a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123, and EPA's Hot-Spot Guidance. Interagency Consultation concurred with this determination on _____. Detailed PM hot-spot analysis, consistent with 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Guidance, shows that the project would not cause or contribute to, or worsen, any new localized violation of PM10 and/or PM2.5 standards.** Go to Step 12.

Step 12. Does the approved PM SIP include any PM10 and/or PM2.5 control measures that apply to the project, and has a written commitment been made as part of the air quality analysis to implement the identified SIP control measures? [(Control measures can be found in the applicable Federal Register notice at: http://www.epa.gov/otaq/stateresources/transconf/reg9sips.htm#ca.]

☐ If yes, **a written commitment is made to implement the identified SIP control measures for PM10 and/or PM2.5 through construction or operation of this project (40 CFR 93.117).** Go to Step 14.

☒ If no, go to Step 13.

Step 13a. Have project-level mitigation or control measures for CO, PM10, and/or PM2.5, included as part of the project's design concept and scope, been identified as a condition of the RTP or TIP conformity determination? AND/OR

Step 13b. Are project-level mitigation or control measures for CO, PM10, and/or PM2.5 included in the project's NEPA document?

AND

Step 13c (applies only if Step 13a and/or 13b are answered "yes"). Has a written commitment been made as part of the air quality analysis to implement the identified measures?

☐ If yes to 13a and/or 13b and 13c, **a written commitment is made to implement the identified mitigation or control measures for CO, PM10, and/or PM2.5 through construction or operation of this project. These mitigation or control measures are identified in the project's NEPA document and/or as conditions of the RTP or TIP conformity determination[1] (40 CFR 93.125(a)).** Go to Step 14.

☒ If no, go to Step 14

Step 14. Does the project qualify for a 771.117(c)(22), (c)(23), (c)(26), (c)(27), or (c)(28)[4] Categorical Exclusion pursuant to 23 USC 326 and is an Air Quality Conformity Analysis required to document any analysis required by Steps 1 through 13 of this form?[5]

☐ If yes, then Caltrans prepares the Air Quality Conformity Analysis and makes the conformity determination. No FHWA involvement is required. See the AQCA Annotated Outline. Go to Step 17.

☒ If no, go to Step 15.

Step 15. Does the project quality for any Categorical Exclusion pursuant to 23 USC 326 (including 771.117(c)(22), (c)(23), (c)(26), (c)(27), or (c)(28) when NO Air Quality Conformity Analysis is required)?

☒ If yes, then no FHWA involvement is required and Caltrans makes the conformity determination through its signature on the CE form. **An Air Quality Conformity Analysis (AQCA) is not needed.** Go to Step 17.

☐ If no, go to Step 16.

Step 16. Does the project require preparation of a Categorical Exclusion, EA, or EIS pursuant to 23 USC 327?

☐ If yes, then Caltrans submits a conformity determination to FHWA for FHWA's conformity determination. **An AQCA is needed.** See the AQCA Annotated Outline.

Date of FHWA air quality conformity determination: ____

Go to Step 17.

Step 17. STOP as all air quality conformity requirements have been met.

Signature: Michael Slavick

Printed Name: Michael Slavick **Date:** September 29, 2017

Title: Senior Air Quality Specialist

[4] Please note that certain activities covered by these categorical exclusions may require that Caltrans prepare an Air Quality Conformity Analysis rather than documenting the conformity determination with the Senior Environmental Planner's signature on the Categorical Exclusion form.

[5] Please note that for ALL projects the project file must include evidence that one of the three following situation applies: 1) Conformity does not apply to the project area; or 2) The project is exempt from all conformity analysis requirements; or 3) The project is subject to project-level conformity analysis (and possibly regional conformity analysis) and meets the criteria for a conformity determination. The project file must include all supporting documentation and this checklist.

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