CHAPTER 7
AIR QUALITY IMPACTS

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7.1 Introduction

This chapter describes the impacts related to the implementation of the R Street Area Implementation Plan (RSAIP) on local and regional air quality. The chapter was prepared using methodologies and assumptions recommended by the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Guide to Air Quality Assessment (2004). The project site is in Sacramento County, under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). The SMAQMD is responsible for implementing emissions standards and other requirements of federal and state laws.

7.2 Environmental Setting

The project is within the SMAQMD, which is part of the Sacramento Valley Air Basin (SVAB). The Sacramento Valley Air Basin has been further divided into Planning Areas called the Northern Sacramento Valley Air Basin (NSVAB) and the Greater Sacramento Air Region. The SMAQMD is responsible for implementing emissions standards and other requirements of federal and state laws.

7.2.1 Climate and Atmospheric Conditions

Sacramento County is located at the southern end of the Sacramento Valley, which is bounded by the Coast and Diablo ranges on the west and the Sierra Nevada range on the east. The county is about 50 miles northeast of the Carquinez Strait, a sea-level gap between the Coast Range and the Diablo Range. The prevailing winds are from the south, primarily because of marine breezes through the Carquinez Strait, although during winter the sea breezes diminish and winds from the north occur more frequently.

The project area experiences episodes of poor atmospheric mixing caused by inversion layers. Inversion layers are formed when temperature increases with elevation above ground, or when a mass of warm dry air settles over a mass of cooler air near the ground. Surface inversions (0-500 feet) are most frequent during the winter, while subsidence inversions (1000-2000 feet) are most frequent during the summer. Inversion layers limit vertical mixing in the atmosphere, trapping pollutants near the surface.

7.2.2 Air Pollutants and Ambient Air Quality Standards

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal and California ambient air quality standards have been established for criteria pollutants whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). The criteria pollutants of greatest concern in Sacramento County are carbon monoxide (CO), ozone, inhalable particulate matter less than 10 microns in diameter (PM10), and fine particulate matter less than 2.5 microns in diameter (PM2.5). A summary of state and federal ambient air quality standards for criteria pollutants is shown in **Table 7-1**. The major sources and health effects of these pollutants are described below.

Ozone

Ozone is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. Ozone precursors, which include ROG and NOx, react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials.

State and federal standards for ozone have been set for a 1-hour averaging time. The state 1-hour ozone standard is 0.09 ppm, not to be exceeded. The federal 1-hour ozone standard is 0.12 ppm, not to be exceeded more than three times in any 3-year period. A new federal standard for ozone was issued by the federal government in July 1997. The new ozone standard has been set at a concentration of 0.08 ppm measured over 8 hours. A new state 8-hour ozone standard of 0.07 ppm was approved by the California Air Resources Board on April 28, 2005 and is expected to become effective in early 2006.

Inhalable Particulate Matter

Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled. Few particles larger than 10 microns in diameter reach the lungs. Consequently, both the federal and state air quality standards for particulate matter apply only to particulate matter 10 microns or less in diameter (generally designated as PM10).

The California ambient air quality standards (CAAQS) for PM10 are 50 micrograms per cubic meter (μg/m3) as a 24-hour average and 20 μg/m3 as an annual geometric mean. The federal PM10 standards are 150 μg/m3 as a 24-hour average and 50 μg/m3 as an annual arithmetic mean.

PM10 conditions in Sacramento County reflect a mix of rural and urban sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere.

New federal standards for particulate matter less than 2.5 microns in diameter (generally designated as PM2.5) were issued in July 1997 by the federal government. PM2.5 is sometimes referred to as "fine particulate matter". The new PM2.5 standards have been set at concentrations of 15 μg/m3 annually and 65 μg/m3 daily. The federal standards for PM10 are being maintained so that relatively larger, coarser particulate matter continues to be regulated. California has also recently established an annual PM2.5 standard of 12 μg/m3.

The effects of high concentrations of PM on humans include aggravation of chronic respiratory illness, such as bronchitis and asthma, and heart/lung disease symptoms. Fine particulate matter (PM2.5) is a concern because it can bypass the body's natural filtration system more easily than larger particles, and can lodge deep in the lungs. Non-health effects include reduced visibility and soiling of surfaces.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless, poisonous gas whose primary source is motor vehicle emissions. Concentrations of this gas are highest near intersections of major roads. Because meteorological conditions are a significant factor affecting the development of high levels of CO, CO is primarily a winter period pollution problem, when periods of light winds or calm conditions combine with the formation of ground level temperature inversions; typically from the evening through the early morning period. Data from previous studies suggest that CO problems occur primarily in the vicinity of major traffic arteries having significant amounts of commercial development where parking lots are prevalent and there are a high number of "cold starts".

CO levels are a public health concern because CO combines readily with hemoglobin and thus reduces the amount of oxygen transported in the blood stream.

Table 7- 1
Ambient Air Quality Standards Applicable in California

Pollutant	Symbol	Average Time	Standard, as parts per million		Standard, as micrograms per cubic meter		Violation Criteria	
			California	National	California	National	California	National
Ozone	O_3	1 hour	0.09	0.12	180	235	If exceeded	If exceeded on more than 3 days in 3 years
		8 hours	0.07*	0.08	137	157	N/A	If exceeded on more than 3 days in 3 years
Carbon monoxide	CO	8 hours	9.0	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year
		1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year
Nitrogen dioxide	NO_2	Annual average 1 hour	N/A 0.25	0.053 N/A	N/A 470	100 N/A	N/A If exceeded	If exceeded N/A
Sulfur dioxide	SO_2	Annual average 24 hours	N/A 0.05	0.03 0.14	N/A 131	80 365	N/A If exceeded	If exceeded If exceeded on more than 1 day per year
		1 hour	0.25	N/A	665	N/A	N/A	N/A
Hydrogen sulfide	H_2S	1 hour	0.03	N/A	42	N/A	If equaled or exceeded	N/A
Vinyl chloride	C_2H_3Cl	24 hours	0.010	N/A	26	N/A	If equaled or exceeded	N/A

Table 7- 1
Ambient Air Quality Standards Applicable in California

Pollutant	Symbol	Average Time	Standard, as parts per million		Standard, as micrograms per cubic meter		Violation Criteria	
			California	National	California	National	California	National
Inhalable particulate Matter	PM10	Annual geometric mean Annual arithmetic mean 24 hours	N/A N/A N/A	N/A N/A N/A	N/A 20 50	N/A 50 150	If exceeded N/A N/A	N/A If exceeded If exceeded on more than 1 day per year
Fine particulate matter	PM2.5	Annual arithmetic mean 24 hours	N/A N/A	N/A N/A	12 N/A	15 65	N/A N/A	If exceeded If exceeded on more than 1 day per year
Sulfate particles	SO_4	24 hours	N/A	N/A	25	N/A	If equaled or exceeded	N/A
Lead particles	Pb	Calendar quarter	N/A	N/A	N/A	1.5	N/A	If exceeded no more than 1 day per year
		30 days	N/A	N/A	1.5	60	If equaled or exceeded	N/A

Notes: All standards are based on measurements at 25 C and 1 atmosphere pressure.
National standards shown are the primary (health effects) standards.
N/A = not applicable.
*This concentration was approved by the Air Resources Board on April 28, 2005 and is expected to become effective in early 2006.

7.2.3 Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Land uses such as schools, hospitals, and convalescent homes are considered to be more sensitive to poor air quality, because the young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems in comparison to the general public. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercising places a high demand on respiratory functions, which can be impaired by air pollution.

Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, with the majority of workers spending the majority of their time indoors. In addition, the working population is generally the healthiest segment of the public.

Sensitive receptors include the local residences and schools located adjacent to the roadways within the project area.

7.2.4 Current Air Quality

The California Air Resource Board has seven air pollution monitoring sites within Sacramento County and three within the City of Sacramento. The air quality monitoring stations measure hourly pollutants and record sufficient data to meet EPA and/or ARB criteria for quality assurance. The closest monitoring site to the project area is located at 13th Street and T Street.

Monitoring results for the three most recent years recorded at the 13th and T monitoring station are summarized in **Table 7-2**. Those results show no exceedances of either the state or federal ambient CO standards, occasional violations of the state 1-hour ozone and federal 8-hour ozone standards, and several violations of the state PM10 standard.

7.3 Regulatory Setting

Air quality management responsibilities exist at local, state, and federal levels of government. Air quality management planning programs developed during the past decade have generally been in response to requirements established by the federal Clean Air Act. However, the enactment of the California Clean Air Act of 1988 (CCAA) has produced additional changes in the structure and administration of air quality management programs in California.

7.3.1 Air Quality Management at the Federal Level

As required by the Federal Clean Air Act (FCAA), the EPA has established and continues to update the NAAQS for the original six "criteria" air pollutants: ozone (O3), carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), suspended particulate matter (PM10 and PM2.5), and lead (Pb). Standards for these pollutants (listed in **Table 7-1**) represent the levels of air quality necessary, with an adequate margin of safety, to protect the public health and welfare.

The EPA has recently approved changes to the ozone and PM10 federal standards. In place of the current ozone standard, the EPA approved an 8-hour standard of 0.08 parts per million (ppm) (rather than the current one-hour standard of 0.12 ppm). In addition to the current PM10 standard, the EPA approved a standard for suspended particulate matter less than 2.5 microns (PM2.5). Although these changes have been approved, implementation of the new standards and monitoring of ambient conditions relative to these new standards is an ongoing process.

The FCAA requires states to classify air basins (or portions thereof) as either "attainment" or "non-attainment" with respect to criteria air pollutants, based on whether the NAAQS have been achieved, and to prepare air quality plans containing emission reduction strategies for those areas designated as "non-attainment." The Lower Sacramento Valley Air Basin, in which the proposed project is located, is designated as non-attainment for the federal and state ozone NAAQS and for the PM10 standards (Table 7-2).

TABLE 7-2
Summary of Pollutant Monitoring Data at T Street in Sacramento

Pollutant Standards	2003	2004	2005
Ozone (O_3)			
Maximum 1-hour concentration (ppm)	0.111	0.105	0.108
Maximum 8-hour concentration (ppm)	0.091	0.075	0.087
Number of Days Standard Exceeded[a]			
CAAQS 1-hour (>0.09 ppm)	4	1	4
NAAQS 1-hour (>0.12 ppm)	0	0	0
NAAQS 8-hour (>0.08 ppm)	1	0	1
Carbon Monoxide (CO)			
Maximum 8-hour concentration (ppm)	3.4	3.0	2.1
Maximum 1-hour concentration (ppm)	5.8	3.5	2.8
Number of Days Standard Exceeded[a]			
CAAQS 8-hour (≥9.0 ppm)	0	0	0
NAAQS 8-hour (≥9.0 ppm)	0	0	0
CAAQS 1-hour (≥20 ppm)	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0
Particulate Matter (PM10)			
Maximum 24-hour concentration ($\mu g/m^3$)	65	58	50
Second highest 24-hour concentration ($\mu g/m^3$)	45	49	34
Average arithmetic mean concentration ($\mu g/m^3$)	23.3	N/A	N/A
Number of Days Standard Exceeded[a]			
CAAQS 24-hour (>50 $\mu g/m^3$)[b]	6	N/A	N/A
NAAQS 24-hour (>150 $\mu g/m^3$)[b]	0	N/A	N/A
Particulate Matter (PM2.5)			
Maximum 24-hour concentration ($\mu g/m^3$)	49	46	50
Second highest 24-hour concentration ($\mu g/m^3$)	41	43	47
Average arithmetic mean concentration ($\mu g/m^3$)	N/A	N/A	N/A
Number of Days Standard Exceeded[a]			
NAAQS 24-hour (>65 $\mu g/m^3$)[c]	N/A	N/A	N/A

TABLE 7-2

Summary of Pollutant Monitoring Data at T Street in Sacramento

Notes:

CAAQS = California Ambient Air Quality Standards.

NAAQS = National Ambient Air Quality Standards.

[a] The number of days above the standard is not necessarily the number of violations of the standard for the year.

[b] Calculated exceedances based on measurements taken every 6 days.

[c] Calculated exceedances based on measurements taken every 3 or 6 days, depending on the time of year and the site's monitoring schedule.

Source: CARB 2006 (http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w/start) and EPA 2006 (http://www.epa.gov/air/data/geosel.html).

7.3.2 Air Quality Management at the State Level

The CCAA focuses on attainment of the state ambient air quality standards that, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. The CCAA requires that air districts prepare an air quality attainment plan if the district violates state air quality standards for CO, sulfur dioxide (SO2), NOx, or ozone. **Table 7-3** shows that the Sacramento area is classified as a nonattainment area for the state ozone and PM10 standards. No locally-prepared attainment plans are required for areas that violate the state PM10 standards.

TABLE 7- 3

Federal and State Attainment Status

Pollutant	State Status	Federal Status
Ozone	Nonattainment	Nonattainment, serious for 8-hour average Nonattainment, severe for 1-hour average
PM10	Nonattainment	Nonattainment, moderate
PM2.5	Attainment	Attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment

The CCAA requires that the state air quality standards be met as expeditiously as practicable, but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards. The least stringent

requirements were set for areas that were expected to achieve air quality standards by the end of 1994. The most stringent requirements were set for areas that did not achieve the standards until after 1997.

The air quality attainment plan requirements established by the CCAA are based on the severity of air pollution problems caused by locally-generated emissions. Upwind air pollution control districts are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts.

7.3.3 Sacramento Metropolitan Air Quality Management District

The Sacramento Metropolitan Air Quality Management District (SMAQMD) developed the 1991 Air Quality Attainment Plan (AQAP) for Sacramento County (Sacramento Metropolitan Air Quality Management District 1991). The 1991 AQAP addresses attainment of California air quality standards for ozone and CO. The plan listed Sacramento as a severe nonattainment area for ozone (compliance to be achieved after 1997) and a moderate nonattainment area for CO (compliance to be achieved by 1994). The 1991 AQAP placed great emphasis on both transportation control measures and indirect source control measures. Updates of the AQAP's are required once every three years.

The SMAQMD also published the Sacramento Area Regional Ozone Attainment Plan to address attainment of the federal ozone standard (Sacramento Metropolitan Air Quality Management District 1994). This 1994 plan has been incorporated into California's State Implementation Plan (SIP). This plan was prepared to comply with one of the requirements of the federal Clean Air Act Amendments of 1990. To avoid duplication, the California Air Resources Board (CARB) has proposed that the SMAQMD use this plan to also meet state requirements. Consequently, this plan satisfies the requirement for an updated AQAP.

The federal Clean Air Act Amendments also require that a 1999 milestone analysis be prepared for the Sacramento ozone nonattainment area to determine whether there have been sufficient emission reductions to meet the minimum rate-of-progress targets specified in the Act. The milestone report evaluates the control measures that have actually been adopted and implemented in comparison to the overall comprehensive attainment strategy contained in the 1994 SIP (Sacramento Metropolitan Air Quality Management District, et al. 2000). The total 1999 emission reduction commitments in the 1994 SIP were 19.0 tons per day (tpd) of (volatile organic compounds (equivalent to ROG) and 11.6 tpd of NOx.

The 1999 milestone evaluation of regional, state and federal measures resulted in estimated actual reductions of 17.2 tpd of volatile organic compounds and 8.4 tpd of NOx for the Sacramento nonattainment area. However, surplus emission reductions from some SMAQMD control

measures and other state control measures compensated for much of the shortfall (Sacramento Metropolitan Air Quality Management District, et al. 2000). The most recent milestone report was prepared for 2002 (SMAQMD, 2003). That report found that the Sacramento area has met its rate of progress requirements by exceeding its ROG emission reduction goals and by meeting its NOx emission reduction goals.

7.4 Standards of Significance

State CEQA Guidelines Appendix G state that a project would normally have a significant effect on the environment if it would:

- conflict with or obstruct implementation of the applicable air quality management plan;
- violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- expose sensitive receptors to substantial pollutant concentrations; or
- create objectionable odors affecting a substantial number of people.

The guidelines further state that the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the determinations above. On March 28, 2002 the SMAQMD Board adopted revisions to the thresholds used in Sacramento County. Project-related air emissions would have a significant effect if they resulted in concentrations that create either a violation of an ambient air quality standard (as identified in **Table 7-1**) or contribute to an existing air quality violation. **Table 7-4** identifies the District's thresholds at which emissions are considered to have a significant effect on air quality throughout the SMAQMD.

TABLE 7-4.

Sacramento Metropolitan Air Quality Management District Thresholds of Significance

Project Phase	Emissions			
	ROG (lbs.day)	NO_x (lbs.day)	CO (lbs.day)	PM10 (lbs.day)
Construction (short-term)	None	85	CAAQS[1]	CAAQS[1]
Operational (long-term)	65	65	CAAQS[1]	CAAQS[1]

[1] A project that may cause an exceedance of a state air quality standard, or may make a substantial contribution to an existing exceedance of an air quality standard will have a significant adverse air quality impact. "Substantial" is defined as making measurably worse, which is five percent or more of an existing exceedance of a state ambient air quality standard.

Source: Sacramento Metropolitan Air Quality Management District 2004

7.5 Impacts and Mitigation Measures

IMPACT 7.1: Construction Emissions

PP Proposed Project

Construction emissions generally consist of NOx and PM10 and are primarily associated with construction employee commute vehicles, asphalt paving operations, mobile construction equipment (i.e., cranes, forklifts, etc.), stationary construction equipment, and architectural coatings. Construction-related particulate emissions result from construction equipment exhaust, and fugitive dust from land clearing, earthmoving, and wind erosion of exposed soil.

The RSAIP strategies include roadway improvements in four phases and water line improvements in two phases. Emissions of ROG, NOx, and PM10 associated with the proposed infrastructure projects were estimated by applying the Roadway Construction Emissions Model (SMAQMD, 2003). This model analyzes emissions associated with construction of roadway improvement projects using the program's default values.

Table 7-5 summarizes the proposed construction phases and assumptions used for the construction period air quality analysis:

TABLE 7-5 Project Component Construction Period Emissions Assumptions				
Project Component	**Location**	**Total Acres Disturbed**	**Dimension Assumptions**	**Construction Timing Estimate**
Street Improvements Phase 1	R Street ROW between 10th and 13th Streets.	Maximum 3 acres	1400 linear feet X 80 foot ROW	2008
Street Improvements Phase 2	R Street ROW between 16th and 18th Streets.	Maximum 2 acres	900 linear feet X 80 foot ROW	2009-2010
Street Improvements Phase 3	R Street ROW between 13th and 15th Streets.	Maximum 2 acres	900 linear feet X 80 foot ROW	2009-2010
Street Improvements Phase 4	R Street ROW between 15th and 16th Streets.	Maximum 1 acres	500 linear feet X 80 foot ROW	2013
Waterline Phase II	16th to 18th Street	Maximum 2 acres	900 linear feet X 80 foot ROW	2009 -2010
Waterline Phase III	13th to 15th Street	Maximum 2 acres	900 linear feet X 80 foot ROW	2012 or beyond

The SMAQMD's screening level for construction projects is less than 5 acres per day. Projects with less than 5 acres disturbed per day do not require dust control measures and are assumed to have less than significant PM10 impacts on the environment. Thus, assuming that the proposed projects are funded and constructed in the phases identified in the RSAIP, each project phase would result in less-than-significant project emissions. Because it cannot be guaranteed that the projects will be phased and funded in the stages identified in the RSAIP, a worst case assumption was developed for this analysis. The worst case project assumes that Street Improvement Phases 2 through 4 are funded as one project resulting in a total of 5 acre area of disturbance.[1] Table 7-6 shows the estimated emissions based on calculations developed through the Roadway Construction Emissions Model (SMAQMD, 2003).

[1] Phase 1 Street improvements were excluded from this worst case assumption since these improvements are currently funded and are in design and engineering. Therefore, the first phase of improvements is considered to be on a much more accelerated schedule than the remaining phases of improvements. It is therefore, assumed that Phase 1 which is less than 5 acres will be implemented in the immediate future as a separate project. The waterline projects even if funded together are less than 5 acres and furthermore, if substantial funding is realized it is assumed that these would be implemented concurrent with the street improvements located in the same area.

TABLE 7-6
Emission Estimates for R Street Future Street Improvements (13th to 18th Streets)

Project Phases	Emissions				Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)
	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)		
Grubbing/Land Clearing	8	35	37	27	2	25
Grading/Excavation	8	35	38	27	2	25
Drainage/Utilities/Sub-Grade	9	38	40	27	2	25
Paving	4	18	23	1	1	0
Maximum (pounds/day)	9	38	40	27	2	25
Total (tons/construction project)	1	2	3	2	0	1

Notes:
Project Start Year: 2009
Project Length (months): 7
Total Project Area (acres): 5
Maximum Area Disturbed/Day (acres): 5
Total Soil Imported/Exported (yd3/day): 5

PM10 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 are the sum of exhaust and fugitive dust emissions.

Table 7-7 compares the estimated emissions for the worst case street project to current construction period thresholds.

TABLE 7-7
Proposed Project Construction Emissions (in Pounds Per Day)

	Reactive Organic Gases	Nitrogen Oxides	PM_{10}
Project Emissions	9	40	25
SMAQMD Significance Threshold	65	85	-

Emissions from construction are below the SMAQMD threshold of significance for construction (85 pounds per day of NOx), and would not be expected to result in any violations of either State or federal ambient air quality standards (Table 7-1). Therefore, construction period impacts of the proposed project are estimated to be ***less-than-significant.***

AA No Project Alternative

The No Project Alternative would not generate construction related emissions and would result in ***no impact***.

MITIGATION MEASURE

None Required.

IMPACT 7.2: Near Term Increase in Regional Emissions from Vehicle Exhaust

PP Proposed Project

The proposed project does not change existing or planned land uses and as such does not generate any new vehicle trips not previously analyzed and anticipated in the General Plan and the R Street Master Plan Component of the Central City Community Plan and the associated EIR for these plans. The street improvements are not anticipated to substantially change operating conditions along R Street. Therefore, it is not expected that the Proposed Project would result in a significant increase in vehicle trips or congestion that would create vehicle emissions. For these reasons the project is considered to have a ***less-than-significant impact*** on regional vehicle emissions.

AA No Project Alternative

The No Project Alternative would not result in a change in regional emissions, which would result in a ***no impact***.

MITIGATION MEASURE

None Required.

IMPACT 7.3: Cumulative Long Term Air Quality Impacts

As noted above, the proposed project will not increase regional vehicle trips. Under the Central City R Street Master Plan, new housing and development is encouraged in the R Street corridor. Although vehicle trips will increase over time under the R Street Master Plan (with or without the

project), improved engine technology and lower emission factors will reduce vehicle emissions. Consequently, ozone precursor emissions would likely decrease in the Sacramento Central City area as a result of improved engine technology and the turnover in the vehicle fleet. The project is therefore, not expected to result in a significant contribution to the cumulative emissions. The impact is considered ***less-than-significant***.

References:

California Air Resources Board. 2006. (http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w/start)

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