3.0 INITIAL STUDY CHECKLIST

The environmental factors checked below would be potentially affected by this project as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agricultural Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology / Soils
☒ Hazards & Hazardous Materials	☒ Hydrology / Water Quality	☐ Land Use / Planning
☐ Mineral Resources	☒ Noise	☐ Population / Housing
☐ Public Services	☐ ***Recreation***	☒ Transportation / Traffic
☒ Utilities / Service Systems	☒ Mandatory Findings of Significance	

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to the earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Melissa D. Logue, Environmental Planner	**City of Rancho Cordova**
Printed Name	For

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.I AESTHETICS Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The project area is located on International Drive, and is perpendicular to Kilgore Road in the City of Rancho Cordova. The proposed project site is bounded by a new Single Family Residential development to the south, Industrial and Office Parks to the north and west, Open Space along the Folsom South Canal, and Industrial and Office Parks to the east of the canal. The majority of the project area has been disturbed by installation of a large sewer interceptor by Sacramento County in 2006 and 2007. Some small and medium-sized native and non-native trees are within the project area within existing landscaped medians on Sunrise Boulevard, and along frontages of commercial buildings on Monier Circle.

DISCUSSION OF IMPACTS

a) Would the project have a substantial adverse effect on a scenic vista?

No Impact. There are no identified scenic vistas within or in the vicinity of the project site; therefore, the proposed project would have no effect on a scenic vista.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. No roadway in the area is designated as a state scenic highway. The nearest highways are United States 50 (US 50) and the Jackson Highway (State Route 16), which are not designated as a state scenic highway in the vicinity of the proposed project site. US 50 is approximately two (2) miles north of the project site and State Route 16 is approximately seven (7) miles south of the project site. Additionally, no other scenic resources, such as rock outcroppings, trees, or historic building exist within

or near the project area. Therefore, the project would result in no impacts to scenic resources in or near the project area.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant With Mitigation Incorporated. The project proposes to extend International Drive to terminate at Sunrise Boulevard from its current terminus at Kilgore Road. The extended International Drive is planned as a six-lane roadway, and would include a new bridge over the Folsom South Canal in the eastern portion of the project area. The project area is highly disturbed and implementation of the project would not include any activities that would degrade the existing visual character or quality of the site and its surroundings.

As discussed below in Section 3.11 Noise, a six-foot tall sound wall is currently located at the southern edge of the future roadway corridor. The existing sound wall separates the future roadway corridor from a residential development immediately adjacent to the corridor. In order to mitigate for additional noise that would be created by the proposed new roadway, the existing sound wall height must be raised to either eight or 10 feet tall, depending on location, to shield adjacent residences from roadway noise. Overall, because there is an existing sound wall at the project location, and because the majority of the viewers of the taller sound wall that would be constructed with the project would be motorists utilizing the new International Drive roadway who would have only a transient view of the taller sound wall, the increase in sound wall height would result in a ***less than significant*** visual impact to users of the roadway and passers by who may use the bicycle trail along Folsom South Canal.

The existing sound wall is located within immediate view of the backyards of the residences that are adjacent to the roadway. This increase in sound wall height would result in a larger visual barrier between the residence's backyards and surrounding areas. While there are no views of scenic resources in the surrounding areas that would be obstructed by the taller sound wall, the increased height of the sound wall could result in the sound wall becoming the dominant visual feature of the residential backyards that abut the roadway corridor. This could change the visual character of the individual views from adjacent residential backyards, particularly for the residences where the sound wall would be raised to 10-feet in height. The following mitigation measures shall be implemented to reduce these impacts to less than significant.

MM 3.1-1 The City shall provide compensation to residences that would require a 10-foot tall sound wall in the backyard area. This compensation is to be used by the property owner to purchase and install landscaping that would shield the view of the sound wall from the residential backyard area.

Timing/Implementation: *During right-of-way acquisition.*

Enforcement/Monitoring: *City of Rancho Cordova Development Services.*

After implementation of this mitigation measure, the impacts to the viewpoints of individual residences adjacent to the project area would be ***less than significant with mitigation incorporated***.

d) Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Less Than Significant Impact. Street lighting currently does not exist on International Drive where it terminates at Kilgore Road. New street lighting would be implemented along International Drive and at the intersection of International Drive and Sunrise Boulevard in accordance with city standards. These streetlights would be directed in a downward position to reduce glare. Additionally, the proposed project is located in an urban area, therefore; there would be a less than significant impact to new sources of day or nighttime views in the area.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.2 AGRICULTURE RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The proposed project area is bounded by Single Family Residential housing to the south, Industrial and Office Parks to the north and west, Open Space to the east along the Folsom South Canal, and Industrial and Office Parks to the east of the canal. The project site is located in a highly disturbed urban area with no designated Agricultural land.

DISCUSSION OF IMPACTS

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The proposed project would take place on International Drive and would include a new bridge across the Folsom South Canal terminating at Sunrise Boulevard. The project area is zoned for Industrial/Office Park (MP), Heavy Industrial (M-2), and Special Planning Area (SPA). The proposed project site is not depicted on the CA Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) as having prime farmland (P), farmland of statewide importance (S), and or unique farmland (U). Therefore, there is no impact to the conversion of significant farmland.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. Refer to discussion a), above. There are no parcels in the project site under Williamson Act contract. Furthermore, there are no agricultural activities taking place within the project vicinity. Finally, the roadway extension would not encroach onto land designated as agricultural land or result in the conversion of agricultural land to non-agricultural uses; therefore, the proposed project would not conflict with existing zoning for agricultural use or Williamson Act contracts.

c) Would the project involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use?

No Impact. Refer to discussions a) and b), above. The proposed project would not convert adjacent agricultural land to non-agricultural uses.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.3 AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

REGIONAL SETTING

The proposed project is located within the Sacramento Valley Air Basin (SVAB), which consists of nine counties or portions of counties stretching from Plumas County in the north to Mariposa County in the south. The San Francisco Bay Area Air Basin lies to the west, and the San Joaquin Valley Air Basin is located to the south. The Sierra Nevada Mountain Range surrounds Sacramento County to the east and the Coastal Range towards the west. These mountain ranges direct air circulation and dispersion patterns. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants.

Light winds and atmospheric stability provide frequent opportunities for pollutants to accumulate in the atmosphere. Wind speed and direction also play an important role in the dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing vertically and by transporting it to other locations. The prevailing winds during the summer are from the north and west. These winds, known as “up-valley winds,” originate with coastal breezes that enter the Valley through breaks in the coastal ranges, particularly through the Carquinez Straits in the San Francisco Bay Area.

Ozone, which is classified as a "regional" pollutant, often affects areas downwind of the original source of precursor emissions. Ozone can be easily transported by winds from a source area. Winds from the west transport ozone from the Bay Area to the Sacramento Valley Air Basin. Ozone precursor transport depends on daily meteorological conditions.

Other primary pollutants, carbon monoxide (CO), for example, may form high concentrations when wind speed is low. During the winter, Sacramento County experiences cold temperatures and calm conditions that increase the likelihood of a climate conducive to high localized CO concentrations.

Surface radiant cooling can also cause temperature inversions. On clear winter nights, the ground loses heat at a rapid rate, causing air in contact with it to cool. Once formed, radiation inversions are similar to subsidence inversions with respect to their effects on pollutant dilution. As a result, conditions in Sacramento County are conducive to the containment of air pollutants.

Air Pollution Sources and Current Air Quality

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is responsible for the management of air pollutant emissions. The District regulates air quality through its permit authority for most types of stationary emission sources, and through its planning and review activities for other sources.

Federal and California ambient air quality standards have been established for the following five critical pollutants: nitrogen dioxide, sulfur dioxide, particulate, carbon monoxide, and ozone. Ozone pollution is the most conspicuous type of air pollution and is often characterized by visibility-reducing haze, eye irritation, and high oxidant concentrations (i.e., "smog"). Ozone is a pollutant of particular concern in the Sacramento Valley.

Particulate matter is another pollutant of concern in the Sacramento Valley. Particulate matter of less than 10 microns in diameter, commonly called PM_{10}, and less than 2.5 microns in diameter, commonly called $PM_{2.5}$, refers to substances that can be inhaled into the lungs and can potentially cause serious health problems. Common sources of particulate matter include construction and demolition activities, agricultural operations, burning, and traffic.

In general, there are four major sources of air pollutant emissions in the Sacramento Valley Air Basin including motor vehicles, industrial plants, agricultural activities, and construction activities. Motor vehicles account for a significant portion of regional gaseous and particulate emissions. Local large employers, such as industrial plants, can also generate substantial regional gaseous and particulate emissions. In addition, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.).

Applicable Federal and State standards for each regulated pollution category are provided in **Table 3.3-1**. The applicable standard for each pollution category, for environmental documentation purposes (i.e., identification of significant impacts), is whichever is most stringent of the Federal or State standards. Based on existing monitoring data located nearest the project site, the City of Rancho Cordova and the Sacramento Valley Air Basin are not in compliance with ozone or PM_{10} standards.

Ozone Emissions

The most severe air quality problem in the Sacramento Air Basin is the high level of ozone. Ozone can cause eye irritation and impair respiratory functions. Accumulations of ozone depend heavily on weather patterns and thus vary substantially from year to year. Ozone is produced in the atmosphere through photochemical reactions involving reactive organic compounds (ROG) and nitrogen oxides (NO_X). Numerous small sources throughout the region are responsible for most of the ROG and NO_X emissions in the Basin. Currently, Sacramento County is in non-attainment status for State and Federal ozone standards.

Suspended PM_{10} Emissions

PM_{10} refers to particulate matter less than 10 microns in diameter-those that can be inhaled and cause health effects. Common sources of particulate include demolition, construction activity, agricultural operations, traffic and other localized sources such as fireplaces. Very small particulate of certain substances can cause direct lung damage or can contain absorbed gases that may be harmful when inhaled. Particulate can also damage materials and reduce visibility. Twenty-four hour PM_{10} standards are exceeded occasionally at the Branch Center Road monitoring station. Monitoring station results have not exceeded the national or state annual geometric means during that same time frame. Currently, Sacramento County is in attainment status for Federal PM_{10} standards and is in non-attainment status for State standards.

TABLE 3.3-1
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	State Standard	Federal Standard
Ozone (O_2)	1-Hour	0.09 ppm	--
	8-Hour	0.07 ppm	0.08 ppm
PM_{10}	24-Hour	50 µg/m^3	150 µg/m^3
	Annual	20 µg/m^3	--
$PM_{2.5}$	24-Hour	--	35 µg/m^3
	Annual	12 µg/m^3	15 µg/m^3
Carbon Monoxide (CO)	8-Hour	9.0 ppm	9 ppm
	1-Hour	20 ppm	35 ppm
Nitrogen Dioxide (NO_2)	Annual	--	0.053 ppm
	1-Hour	0.25 ppm	--
Sulfur Dioxide (SO_2)	Annual	--	0.030 ppm
	24-Hour	0.04 ppm	0.14 ppm
	3-Hour	--	--
	1-Hour	0.25 ppm	--
Lead	30-Day Avg.	1.5 µg/m^3	--
	Calendar Quarter	--	1.5 µg/m^3

ppm = parts per million

µg/m3 = Micrograms per Cubic Meter
Source: California Air Resource Board Ambient Air Quality Standards Chart, 11/10/06.

Carbon Monoxide (CO)

Because CO is emitted primarily by motor vehicles and is non-reactive, ambient CO concentrations normally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are also influenced by meteorological factors such as wind speed and atmospheric mixing. High levels of CO can impair the transport of oxygen in the bloodstream and thereby aggravate cardiovascular disease and cause fatigue, headaches, and dizziness. The standards for CO are being met in the Sacramento Air Basin and the SMAQMD does not expect that the standards will be exceeded in the near future.

Nitrogen Dioxide (NO_2)

The major sources of nitrogen dioxide (NO_2), essential to the formation of photochemical smog, are vehicular, residential, and industrial fuel combustion. NO_2 is the "whiskey brown" colored gas evident during periods of heavy air pollution. NO_2 increases respiratory disease and irritation and may reduce resistance to certain infections. The standards for NO_2 are being met in the Sacramento Air Basin and the SMAQMD does not expect that the standards will be exceeded in the near future.

Sulfur Dioxide (SO_2)

The major source of sulfur dioxide (SO_2) is the combustion of high-sulfur fuels for electricity generation, petroleum refining, and shipping. In humid atmospheres, sulfur oxides can react with vapor to produce sulfuric acid, a component of acid rain. SO_2 can irritate the lungs, damage vegetation and materials, and reduce visibility. The standards for SO_2 are being met in the Sacramento Air Basin and the SMAQMD does not expect that the standards will be exceeded in the near future.

Lead (Pb)

Gasoline-powered automobile engines are a major source of airborne lead, although the use of leaded fuel is being reduced. Lead can cause blood effects such as anemia and the inhibition of enzymes involved in blood synthesis. Lead may also affect the central nervous and reproductive systems. Ambient lead levels have dropped dramatically as the percentage of motor vehicles using unleaded gasoline continues to increase. The standards for lead are being met in the Sacramento Air Basin and the SMAQMD does not expect that the standards will be exceeded in the future.

Air Quality Standards

Federal

The 1977 Federal Clean Air Act (CAA) required the U.S. Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for the six criteria air pollutants (these are included in **Table 3.3-1**).

In June of 1997, the EPA adopted new ozone and PM_{10} standards. The EPA intends to phase out the 1–hour ozone standard of 0.12 ppm and replace it with an 8-hour standard of 0.08 ppm.

The EPA also adopted an additional standard for particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). Although monitoring is currently in effect, the planning process to determine compliance with these new standards and the development of control programs to meet these standards, if needed, is not yet completed.

Pursuant to the 1990 amendments to the Federal CAA, the EPA has classified air basins (or portions thereof) as either "attainment" or "non-attainment" for each criteria air pollutant, based on whether or not the NAAQS have been achieved.

State

In 1988, the State of California passed the California Clean Air Act (CCAA, State 1988 Statutes, Chapter 1568), which established more stringent State ambient air quality standards and set forth a program for their achievement. The California Air Resources Board (CARB) establishes state air basins and implements state ambient air quality standards (AAQS), as required in the CCAA, and cooperates with the Federal government in implementing pertinent sections of the Federal Clean Air Bill Amendments. Further, CARB is responsible for controlling stationary and mobile source air pollutant emissions throughout the State. Like its Federal counterpart, the CCAA designates areas as attainment or non-attainment, with respect to the state AAQS.

Sacramento County is in the CARB-designated Sacramento Valley Air Basin (SVAB). In addition to Sacramento County, the SVAB includes Yolo and Solano Counties to the west, and eight other counties to the north and east.

Regional

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the agency responsible for monitoring and regulating air pollutant emissions from stationary, area, and indirect sources within Sacramento County and throughout the Sacramento Valley Air Basin. The District is also responsible for monitoring air quality and setting and enforcing limits for source emissions. CARB is the agency with the legal responsibility for regulating mobile source emissions. The District is precluded from such activities under State law. The SMAQMD is the agency responsible for preparing regional air quality plans under the State and Federal CAA. The current regional clean air plan addresses ozone and PM_{10} and identifies strategies for progressive reduction in emissions of ozone precursors and particulate matter.

Under the State standards, Sacramento County is in "Non-Attainment" for ozone, PM_{10}, and $PM_{2.5}$ and in "Attainment" or "Unclassified" for other criteria pollutants. Sacramento County is also in "Non-Attainment" for Federal ozone and PM_{10} standards, but is considered in "Attainment" or "Unclassified" for other Federal criteria pollutants.

City of Rancho Cordova

The Rancho Cordova Draft General Plan Air Quality Element has goals, policies, and actions focusing on improving air quality through embracing regional coordination, "smart growth" land use concepts, transportation demand management, energy conservation, cleaner industries and vehicles, and public education

Standards of Significance

According to the California Environmental Quality Act (CEQA), a project will normally have a significant impact on air quality if it will "violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations".

For localized pollutants, such as carbon monoxide, an increase in concentrations that would result in a predicted violation of the most stringent State or Federal standard (35.0 ppm for 1-hour or 9.0 ppm for 8-hours) is considered to represent a significant impact. This assessment provides for two types of localized area pollutant impact analysis, (1) street and highway improvements, and (2) traffic volumes and construction impacts.

For purposes of this study, an impact is considered significant if one or more of the following conditions occur from implementation of the project:

- Regional air quality emission exceed standards;
- Local air quality emission exceed standards;
- Significant construction related air quality impacts occur; and/or
- The creation of objectionable odors.

SMAQMD has established thresholds for certain pollutants. For localized pollutants, such as CO, an increase in concentrations that would result in a predicted violation of the most stringent State or Federal standard (35.0 ppm for 1-hour or 9.0 ppm for 8-hours) is considered to represent a significant impact. For regional pollutants, such as ozone precursors (NO_x and ROG), SMAQMD establishes thresholds for both project-related operational pollutant increases and construction-related increases (reference **Table 3.3-2** and **Table 3.3-3**).

TABLE 3.3-2
SMAQMD SIGNIFICANCE CRITERIA OPERATIONAL EMISSION THRESHOLDS

Ozone Precursor Emissions	Emission Thresholds lbs./day
NOX	65
ROG	65

Source: Sacramento Metropolitan Air Quality Management District Guide to Air Quality Assessment in Sacramento County, July 2004.

TABLE 3.3-3
SMAQMD SIGNIFICANCE CRITERIA CONSTRUCTION-RELATED EMISSION THRESHOLDS

Ozone Precursor Emissions	Emission Thresholds lbs./day
NO_X	85
ROG	none

Source: Sacramento Metropolitan Air Quality Management District Guide to Air Quality Assessment in Sacramento County, July 2004.

DISCUSSION OF IMPACTS

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant. The proposed project is included in the current Metropolitan Transportation Plan (SACOG 2006), which identifies planned significant transportation projects in the Sacramento Region and provides an assessment if operation of these planned transportation facilities would violate applicable federal and state air quality plans. Because the project is included in a current and conforming MTP, it is not anticipated that operation of the project would conflict with or obstruct implementation of the applicable air quality plans.

The proposed project would not result in an increase in the population, nor result in a substantial change in overall VMT that would conflict with the projections used for development of regional air quality attainment plans. In addition, implementation of the proposed project would not obstruct implementation of any of the proposed control measures contained in regional air quality plans. As a result, this impact is considered **less than significant.**

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

LONG-TERM AIR QUALITY IMPACTS

Less than Significant. Implementation of the proposed project would relieve congestion and reduce vehicle delay at nearby roadways and intersections, such as White Rock Road, particularly during peak commute hours. At vehicle speeds typical of community driving (i.e., below approximately 40 miles per hour), increases in vehicle speeds generally result in slight decreases in emissions of ozone precursor pollutants (i.e., ROG and NOx) and carbon monoxide (CO). As a result, slight increases in vehicle speeds due to reduction in vehicle congestion would be anticipated to result in a slight reduction in mobile-source criteria air pollutants of primary concern (i.e., ROG, NOx, and CO). As a result, implementation of the proposed project would not be anticipated to result in a substantial long-term increase of criteria air pollutants. Long-term air quality impacts attributable to the proposed project would, therefore, be considered **less than significant.**

SHORT-TERM AIR QUALITY IMPACTS

Less than Significant with Mitigation Incorporated. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but possess the potential to represent a significant air quality impact. The SMAQMD recommends that construction-generated emissions of ozone precursor pollutants (i.e., ROG and NOX) be quantified and presented as part of the analysis of project-generated emissions. However, construction equipment emits relatively low levels of ROG and emissions from construction processes (e.g., asphalt paving, architectural coatings) are typically regulated by the SMAQMD. As a result, the SMAQMD has not adopted a construction emissions threshold for ROG. The SMAQMD has, however, adopted a construction emissions threshold of 85 lbs/day for NOX.

The construction and development of the proposed roadway widening improvements would result in the temporary generation of emissions resulting from site grading and excavation, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. In accordance with SMAQMD-recommendations, short-term construction-generated emissions of ozone precursor pollutants (i.e., ROG, NOX), and PM10 were quantified using the SMAQMD's Road Construction Emissions Model, based on data provided by the project design engineers and default construction equipment assumptions contained in the model. (See **Appendix A**, Air Quality Impact Assessment, 2007 for information on inputs used in the Road Construction Emission Model.) Project-generated emissions would vary, from day to day, depending on the specific activities conducted and would likely be greatest during initial site grading, where estimated daily emissions associated with individual construction processes (e.g., grading, utility installation, paving, etc.) would exceed the SMAQMD's significance threshold for NOX of 85 lbs/day. As a result, short-term increases of construction-generated NOX would be considered **potentially significant** unless the following mitigation measures are implemented:

Mitigation Measures

M.M. 3.3-1 The project shall provide a plan, for approval by Rancho Cordova Planning Department and SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate matter reduction, compared to the most recent CARB fleet average at time of construction. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.[1]

M.M.3.3-2 The project representative shall submit to Rancho Cordova Planning Department and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated

[1] Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. However, this requirement is neither supported by Caltrans nor FHWA due to the State's obligations under the California Public Contract Code regarding restraint of competitive bidding process resulting from the requirement that newer equipment be used, thereby creating a potential disadvantage in bidding opportunities for smaller businesses that do not have inventories of such equipment.

construction timeline including start date, and name and phone number of the project manager and on-site foreman.

M.M.3.3-3 The construction contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and Rancho Cordova Planning Department and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted to Rancho Cordova Planning Department an SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulations.

Timing/Implementation: *During all construction phases of the project.*

Enforcement/Monitoring: *City of Rancho Cordova and SMAQMD.*

M.M.3.3-4 To off-set the project's construction emissions that would continue to exceed the SMAQMD daily NOx emission thresholds after implementation of the above mitigation, the City of Rancho Cordova shall pay, and obtain proof of payment of, an off-site air quality mitigation fee in the amount of $16,781, as calculated by the SMAQMD *Construction Emission Mitigation Fee Calculator*.

Timing/Implementation: *Prior to the start of ground disturbing activities.*

Enforcement/Monitoring: *City of Rancho Cordova.*

Implementation of mitigation measures **MM 3.3-1** through **MM 3.3-4** would serve to reduce the project's short-term construction generated emissions to less then significant levels, and would ensure that construction of the project does not violate any air quality standard, nor would contribute substantially to an existing or projected air quality violation.

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact. The proposed project would extend an existing roadway and re-stripe to allow for additional through lanes. The extended roadway

would increase from four-lanes to six-lanes and would include lanes for vehicular travel, sidewalks, and bike lanes. Although the project would generate short-term air quality impacts as a result of construction activities, it would not result in long-term or cumulatively considerable increases in air quality pollutant emissions for which Sacramento County is currently in non-attainment (PM_{10} and ozone precursors) since the project would not construct traffic generating features. The pollutant increase associated with construction activities would be temporary and would result in less than significant impacts with the implementation of mitigation measures **MM 3.3-1** through **MM 3.3-4**.

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

***Less than Significant Impact*.** Particulate exhaust emissions from diesel-fueled engines (Diesel Particulate Matter or DPM) were identified as a toxic air contaminant (TAC) by the ARB in 1998. Implementation of the proposed project would result in short-term emissions of DPM during construction associated with the use of off-road diesel equipment for site grading and excavation, paving, demolition, and other construction activities. Health-related risks associated with diesel-exhaust emissions are primarily associated with long-term exposure and associated risk of contracting cancer. For residential land uses, the calculation of cancer risk associated with exposure of to TACs are typically calculated based on a 70-year period of exposure.

The City of Rancho Cordova Draft General Plan considers sensitive receptors facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. Examples of these receptors are schools, retirement homes, convalescent homes, hospitals and medical clinics. The nearest sensitive receptors in Rancho Cordova are located approximately 100 feet from the project area. There are residences to the south of the proposed construction activities, however the use of diesel-powered construction equipment, would be temporary and episodic and would occur over a relatively large area. Given that diesel-exhaust fumes would be intermittent, sort-term in nature, and would dissipate rapidly from the construction area, DPM generated by project construction, in and of itself, would not be expected to create conditions where the probability of contracting cancer is greater than 10 in 1 million for nearby receptors. As a result, long-term health risks associated with short-term emissions of DPM would be considered ***less than significant***.

e) Would the project create objectionable odors affecting a substantial number of people?

Less than Significant Impact. Construction activities would involve the use of a variety of gasoline or diesel powered equipment that emits exhaust fumes and use of roadway sealants that emit odors during application. However, equipment emissions would occur intermittently throughout the workday and the exhaust odors are expected to dissipate rapidly within the immediate vicinity of the equipment. Additionally, the odors from roadway sealants would only be emitted during a short period of time during application and would not affect a large area. Employees or residents who live, work, or who pass by, the construction site may find these odors objectionable, but the infrequency of the emissions, rapid dissipation of the exhaust into the air, and short-term nature of the construction activities would result in objectionable odors being a ***less than significant impact***.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.4 BIOLOGICAL RESOURCES	Would the project:			
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

A City of Rancho Cordova biologist conducted a pedestrian reconnaissance-level survey of the project study area (PSA) and surrounding habitat on April 27 and September 21, 2006. Major vegetation, habitat types, and observed animals were noted, mapped, and evaluated. The biological evaluation included surveys for listed species and their habitat, wetland resources, and riparian habitat within the project area. Particular attention was focused upon potential special-status species and their habitats.

METHODOLOGY

Prior to the site visit a background information search for potential special-status species was conducted utilizing the California Natural Diversity Data Base (CNDDB 2006a), CNDDB QuickViewer for unprocessed data (CNDDB 2006b), California Wildlife-Habitat Relationships by the California Department of Fish and Game (CDFG 2002), U.S. Fish and Wildlife Service (USFWS 2006), and California Native Plant Society (CNPS 2006) for the documented occurrences of special-status species within the nine USGS quadrangles surrounding the PSA. In addition a 10-mile search for Swainson's hawk occurrences was conducted to determine the likelihood that this species would forage in the PSA given that Swainson's hawks are known to forage 10 miles from their nest.

VEGETATION

Non-native Grassland

The relatively undisturbed portion of the PSA was dominated by non-native grassland and was devoid of trees with rocky (1-3" diameter) substrate. The dominant vegetation consisted primarily of wild oats (*Avena fatua*), Foxtail chess (*Bromus madritensis ssp. madritensis)*, foxtail barley *(Hordeum murinum)*, hawkbit *(Leontodon taraxacoides)*, rose clover *(Trifolium hirtum)*, winter vetch *(Vicia villosa)*, and wild radish *(Raphanus sativus)*. There was also yellow-star thistle (*Centaurea solstitialis*), Russian thistle (*Salsola tragus*), Italian thistle (*Carduus pycnocephalus*) and bull thistle (*Cirsium arvense*).

Ruderal/Urban

Along Monier Court and Sunrise Boulevard there were several ornamental trees including pines (*Pinus* sp.), plums (*Prunus* sp.), and crape myrtles (*Lagerstroemia* sp.). Within the median along Sunrise Boulevard in the northern portion of the PSA, there were four interior live oaks (*Quercus wislizenii*). Within the median along Sunrise Boulevard in the southern portion of the PSA, there

were five sycamores (*Platanus* sp.) and twelve interior live oaks (three of which had a DBH of less than 6 inches). There was also coyote brush (*Baccharis pilularis*) in the undeveloped parcel in the northeastern corner of Sunrise Boulevard and Monier court.

WATER AVAILABILITY

The only source of water was the Folsom South Canal that transects the project area. There was no evidence of any wetland features. No irrigation systems or irrigation equipment was observed within the PSA.

WILDLIFE OCCURRENCE AND USE

The following section describes the general wildlife use of the property and the surrounding areas. A red-tail hawk *(Buteo jamaicensis)* was observed foraging over the undisturbed portion of the project area and perching on the ladder rungs of the water tower. A raptor nest was observed in a large oak at the southwest corner at the junction between White Rock Road and Folsom South Canal, adjacent to the north side of a substation and over 800 feet from the PSA boundary. Other birds observed within the PSA include killdeer (*Charadrius vociferus*), western meadowlark (*Sturnella neglecta*), western scrub jay (*Aphelocoma coerulescens*), tree swallow (*Tachycineta bicolor*), mourning dove (*Zenaida macroura*), and rock pigeon (*Columba livia*). A jackrabbit *(Lepus californicus)* was observed on the adjacent open space to the northwest. Small mammal burrows were observed within the PSA along the west bank of the canal; however, no burrowing wildlife species were observed.

SPECIAL-STATUS SPECIES

Special-status species are commonly characterized as species that are at potential risk or actual risk to their persistence in a given area or across their native habitat (locally, regionally, or nationally) and are identified by a state and/or federal resource agency as such. These agencies include governmental agencies such as, California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS), or private organizations such as the California Native Plant Society (CNPS). The degree to which a species is at risk of extinction is the limiting factor on a species status designation. Risk factors to a species' persistence or population's persistence include: habitat loss, increased mortality factors (take, electrocution, etc.), invasive species, and environmental toxins.

In context of environmental review, special-status species are defined by the following codes:

- Species that are listed, proposed, or candidates for listing under the Federal Endangered Species Act (FESA) (50 CFR 17.11 – listed; 61 FR 7591, February 28, 1996 candidates)

- Species that are listed or proposed for listing under the California Endangered Species Act (CESA) (Fish and Game Code 1992 §2050 et seq.; 14 CCR §670.1 et seq.)

- Species that are designated as Species of Special Concern by CDFG.

- Species that are designated as Fully Protected by CDFG (Fish and Game Code, §3511, §4700, §5050, §5515)

- Species that meet the definition of rare or endangered under the California Environmental Quality Act (CEQA) (14 CCR §15380)

Special-status plant and wildlife species were determined using a California Natural Diversity Database (CNDDB) using a nine USGS quadrangle search (CNDDB 2006a), CNDDB QuickViewer nine-quadrangle search of unprocessed data (CNDDB 2006b), California Native Plant Society (CNPS) nine-quadrangle search (CNPS 2006), and a United States Fish and Wildlife Service nine-quadrangle search all completed on September 18, 2006 (USFWS 2006). Each special-status species identified with the potential to occur within the PSA is addressed individually.

TABLE 3.4-1
SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROJECT STUDY AREA

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
Plants				
Dwarf downingia Downingia pusilla	~/~/2	Annual herb. Valley and foothill grassland (mesic) and vernal pools. Blooms: March - May. Elevation: 1-445 m.	None	Suitable habitat is not present within the PSA. As appropriate habitat is not present within the PSA, it is unlikely that the species occurs within the PSA. In addition the PSA was surveyed during the blooming period of the species and was not observed.
Boggs lake hedge-hyssop Gratiola heterosepala	~/CE/1B	Annual herb. Marshes, swamps, lake margins, and vernal pools with clay soils. Blooms: April-August Elevation: 10-2,375 m.	None	Suitable habitat is not present within the PSA. As marsh, swamp, or vernal pool habitat is not present within the PSA, it is unlikely that Bogg's Lake hedge-hyssop occurs within the PSA. In addition the PSA was surveyed during the blooming period of the species and was not observed.
Hogwallow starfish Hesperevax caulescens	~/~/4	Annual herb. Dry mud of vernal pools and flats. Blooms: March – June. Elevation: 0- 505 m.	None	Suitable habitat is not present within the PSA. As seasonal wetland and vernal pool habitat is not present within the PSA, it is unlikely that hogwallow starfish occurs within the PSA.
Northern California black walnut Juglans hindsii	~/~/1B	Predominantly along rivers and streams, occasionally in somewhat drier slopes, valleys, and canyons; on rocky/gravelly, well-drained soil. Found within Foothill Woodland and Yellow Pine Forest communities; forming Riparian Forest/ Woodland communities where present along streams. Only two of the three native stands of black walnut are still extant in California. It is widely naturalized in central and northern California. It is declining due to lack of reproduction. It has been reported in Oregon, but its status there is unknown, presumably introduced. Elevation: 0 - 300 m.	None	No California black walnuts were observed within the PSA.

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
Ahart's dwarf rush Juncus leiospermus var. ahartii	~/~/1B	Annual herb. Valley and foothill grassland (mesic). Blooms: March – May Elevation: 30-100 m.	None	Suitable habitat is not present within the PSA. In addition the PSA was surveyed during the blooming period of the species and was not observed.
Legenere Legenere limosa	~/~/1B	Annual herb. Vernal pools. Many historical occurrences extirpated. Blooms: April-June. Elevation: 1-880 m.	None	Suitable habitat is not present within the PSA. As appropriate habitat is not present within the PSA, it is unlikely that Legenere occurs within the PSA. In addition the PSA was surveyed during the blooming period of the species and was not observed.
Pincushion navarretia Navarretia myersii ssp. myersii	~/~/1B	Annual herb. Vernal pools. Blooming period: May. Elevation: 20-330 m.	None	As appropriate habitat is not present within the PSA, it is unlikely that pincushion navarretia occurs within the PSA. In addition the PSA was surveyed during the blooming period of the species and was not observed.
Slender Orcutt grass Orcuttia tenuis	FT/CE/1B	Vernal Pools. Blooms: May – Sept. Elevation: 35-1,760	None	Suitable habitat is not present within the PSA. As vernal pool habitat is not present within the PSA, it is unlikely that slender orcutt grass is present.
Sacramento Orcutt grass Orcuttia viscida	FE/CE/1B	Vernal pools. Known from seven occurrences. Blooms: April – July Elevation: 30-100 m.	None	Suitable habitat is not present within the PSA. As vernal pool habitat is not present within the PSA, it is unlikely that Sacramento orcutt grass is present. In addition the PSA was surveyed during the blooming period of the species and was not observed.
Sanford's arrowhead Sagittaria sanfordii	~/~/1B	Marshes and swamps (assorted shallow freshwater). Extirpated from southern California, and mostly extirpated from the Central Valley. Blooms: May – Oct. Elevation: 0-610 m.	None	Suitable habitat is not present within the PSA. This species need a permanent water source that does not exist within the PSA. As freshwater marsh or swamp habitat is not present within the PSA, it is unlikely that Sanford's area is present.
Invertebrates				
Andrenid bee Andrena blennospermatis	~/CSC	A solitary, ground-nesting bee found in upland areas near vernal pools that	None	Suitable habitat is not present within the PSA.

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
		specialize on pollen of vernal pool flowers. Adults emerge early in the spring, with males emerging slightly earlier and dying off sooner than females. The flight period for females ranges from late February to late April.		
Andrenid bee Andrena subapasta	~/CSC	A solitary, ground-nesting bee that specialize on pollen of vernal pool flowers. Most specimens with floral records are from grassland forbs, however more information about this species is necessary.	None	Suitable habitat is not present within the PSA.
Conservancy fairy shrimp Branchinecta conservatio	FE/~	Inhabits rather large, cool-water vernal pools with moderately turbid water. They have been collected from early November to early April.	None	Suitable habitat is not present within the PSA.
Vernal pool fairy shrimp Branchinecta lynchi	FT/~	Occupies a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. Although the species has been collected from large vernal pools, including one exceeding 25 acres, it tends to occur in smaller pools. It is most frequently found in pools measuring less than 0.05 acre most commonly in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands. Vernal pool fairy shrimp have been collected from early December to early May.	None	Suitable habitat is not present within the PSA.
Midvalley fairy shrimp Branchinecta mesovallensis	~/CSC	Endemic but distribution poorly understood. Associated with vernal pools, vernal swales, and other ephemeral water features. Habitat requirements similar to other local fairy shrimp species but tend to be in more shallow pools.	None	Suitable habitat is not present within the PSA.
Valley elderberry longhorn beetle (VELB) Desmocerus californicus	FT/~	Associated exclusively with elderberry shrubs (*Sambucus spp.*) in Central Valley and foothills during its entire life cycle; larvae	None	Suitable habitat is not present within the PSA. There are no elderberry shrubs within the PSA.

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
dimorphus		bore into elderberry stems and feed upon the pith during their 2-year life cycle.		
Ricksecker's water scavenger beetle Hydrochara rickseckeri	~/CSC	*Hydrochara rickseckeri* is a small aquatic beetle known only from pond habitats scattered around the San Francisco Bay area, including Marin, Sonoma, Alameda, and Contra Costa counties. It is an unusual species whose closest apparent relative is known from eastern Asia. Historical collecting records indicate that populations of this species probably have long existed at low densities. Where and if any populations of *Hydrochara rickseckeri* still exist is unknown.	None	Suitable habitat is not present within the PSA.
Vernal pool tadpole shrimp Lepidurus packardi	FE/~	Inhabits vernal pools containing clear to highly turbid water, ranging in size from 54 square feet in the former Mather Air Force Base area of Sacramento County, to the 89-acre Olcott Lake at Jepson Prairie. Tadpole shrimp climb objects and plow along or within bottom sediments feeding on organic debris and living organisms, such as fairy shrimp and other invertebrates.	None	Suitable habitat is not present within the PSA.
California linderiella fairy shrimp Linderiella occidentalis	~/CSC	Inhabits large, fairly clear vernal pools and lakes. The California fairy shrimp is the most common fairy shrimp in the Central Valley. It has been documented on most land forms, geologic formations and soil types supporting vernal pools in California, at altitudes as high as 3,800 ft above sea level.	None	Suitable habitat is not present within the PSA.
Fish				
Delta smelt Hypomesus transpacificus	FT/CT	Located exclusively in the Sacramento-San Joaquin Delta. They have been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River. They extend downstream as far as San Pablo	None	Folsom South Canal originates at Nimbus Dam, on the American River, in Sacramento County, and extends southward. A small portion of the canal crosses over the PSA. The canal is a cement-lined canal that may supply habitat for common fish species, but it is highly

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
		Bay. Delta smelt are found in brackish water.		unlikely that is support special-status fish species do to travel and spawning barriers.
Central Valley ESU steelhead Oncorhynchus mykiss	FT/~	Sacramento and San Joaquin rivers and their tributaries. Suitable spawning habitat occurs also in the Yuba River and tributaries.	None	Folsom South Canal originates at Nimbus Dam, on the American River, in Sacramento County, and extends southward. A small portion of the canal crosses over the PSA. The canal is a cement-lined canal that may supply habitat for common fish species, but it is highly unlikely that is support special-status fish species do to travel and spawning barriers.
Central Valley spring-run ESU chinook salmon Oncorhynchus tshawytscha	FT/CT	Spawns and juveniles rear for up to one year in the Sacramento and Yuba Rivers and their tributaries including Deer Creek.	None	Folsom South Canal originates at Nimbus Dam, on the American River, in Sacramento County, and extends southward. A small portion of the canal crosses over the PSA. The canal is a cement-lined canal that may supply habitat for common fish species, but it is highly unlikely that is support special-status fish species do to travel and spawning barriers.
Sacramento River winter-run ESU chinook salmon Oncorhynchus tshawytscha	FE/CE	Spawns primarily in the mainstem of the Sacramento River with a small number in Battle Creek. Some juveniles rear non-natally for brief periods in lower reaches of tributaries.	None	Folsom South Canal originates at Nimbus Dam, on the American River, in Sacramento County, and extends southward. A small portion of the canal crosses over the PSA. The canal is a cement-lined canal that may supply habitat for common fish species, but it is highly unlikely that is support special-status fish species do to travel and spawning barriers.
Central Valley Fall/late fall-run ESU chinook salmon Onchorhynchus tshawytscha	FC/CSC	Spawn and juveniles rear for 2 to 6 months in the Sacramento and San Joaquin Rivers and their tributaries.	None	Folsom South Canal originates at Nimbus Dam, on the American River, in Sacramento County, and extends southward. A small portion of the canal crosses over the PSA. The canal is a cement-lined canal that may supply habitat for common fish species, but it is highly unlikely that is support special-status fish species do to travel and spawning barriers.
Sacramento splittail Pogonichthys	~/CSC	Sacramento-San Joaquin rivers, their sluggish tributaries and sloughs, and the Delta estuary. Requires flooded vegetation	None	Folsom South Canal originates at Nimbus Dam, on the American River, in Sacramento County, and extends southward. A small

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
macrolepidotus		for spawning and juvenile foraging habitat.		portion of the canal crosses over the PSA. The canal is a cement-lined canal that may supply habitat for common fish species, but it is highly unlikely that is support special-status fish species do to travel and spawning barriers.
Amphibians				
California tiger salamander Ambystoma californiense	FT/CSC	Typically found in annual grasslands of lower hills and valleys; breeds in temporary and permanent ponds and in streams; uses rodent burrows and other subterranean retreats in surrounding uplands for shelter; appears to be absent in waters containing predatory game fish.	None	No records of California tiger salamander are recorded in the CNDDB within five miles PSA. In addition, no suitable habitat occurs within the PSA therefore it is unlikely that the California tiger salamander occurs within the PSA.
California red-legged frog Rana aurora draytonii	FT/CSC	Lowlands and foothill streams, pool, and marshes in or near permanent or late season sources of deep water with dense, shrubby, riparian, or emergent vegetation (e.g. ponds, perennial drainages, well-developed riparian) below 3,936 ft. in elevation. Breeds late December to early April.	None	No suitable habitat is present within the PSA and there are no known occurrences within five miles of the PSA.
Western spadefoot Spea (=Scaphiopus) hammondii	~/CSC	Associated habitat divided between aquatic breeding ponds and upland, non-breeding habitat. During much of the year found in upland grassland, chaparral, and woodland communities. Will travel long distances to ephemeral breeding pools. Breeding typically takes place January-May.	None	No suitable habitat is present within the PSA and there are no known occurrences within five miles of the PSA.
Reptiles				
Northwestern pond turtle Emys (=Clemmys) marmorata marmorata	~/CSC	Permanent or nearly permanent water in various habitats (e.g. ponds, streams, perennial drainages). Requires basking sites particularly in areas vegetated with riparian habitats.	None	No suitable habitat is present within the PSA and there are no known occurrences within five miles of the PSA.
Giant garter snake	FT/CT	Inhabits freshwater sloughs, marshes, canals, wetlands. Also uses rice fields,	None	Twelve occurrences of giant garter snake are listed in the CNDDB within five miles of the

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
Thamnophis gigas		drainage canals and irrigation ditches for hunting and overwinters underground in uplands. This species inhabits small mammal burrows and other soil crevices above prevailing flood elevations throughout its winter dormancy period. Burrows commonly have sunny exposure along south and west facing slopes. The breeding season extends through March and April, and females give birth to live young from late July through early September.		Planning Area. Folsom South Canal is a cemented bed and bank waterway that does not support the appropriate vegetative habitat for the species.
Birds				
Cooper's hawk Accipiter cooperi	~/CSC MBTA	Nests in densely-canopied trees from foothill oak woodlands up to ponderosa pine forests. Nesting usually occurs in a deciduous tree near open water or riparian vegetation. Breeds March to August.	Low (foraging)	There are known occurrences within 5 miles of the PSA, there is a low potential for this species to forage within the PSA.
Tricolored blackbird Agelaius tricolor	~/CSC	Breeds in freshwater wetlands, with tall dense vegetation including tule, cattail, blackberry and rose. Forages in grasslands and croplands. Resident year-round. Breeds April toJuly.	None	No suitable habitat is present within the PSA.
Golden eagle Aquila chrysaetos	~/CSC/CFP MBTA	A large raptor. Found generally in open country including prairies, arctic and alpine tundra, open wooded country, and barren areas, especially in hilly or mountainous regions. Nests on rock ledge of cliff or in large tree (e.g., oak or eucalyptus in California). Pair may have several alternate nests. Egg dates: peak late February-March.	Low (foraging)	There is a low potential for this species to forage within the PSA.
Great egret Ardea alba	~/~ MBTA	(Rookery) Typically nest in large breeding colonies or rookeries. Breeding season typically Feb–Aug. Rookeries typically found in large trees in riparian habitat.	None	No suitable habitat is present within the PSA.

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
Great blue heron Ardea herodias	~/~ MBTA	(Rookery) Colonial nester in tall trees, cliffsides and sequestered spots on marshes. Rookery site in close proximity to foraging areas, marshes, lake margins, tide-flats, rivers, streams, and wet meadows.	None	No suitable habitat is present within the PSA.
Burrowing owl Athene cunicularia	~/CSC	Open grasslands and shrublands up to 5,300 ft with low perches and small mammal burrows. Resident year-round. Breeds March-August.	None	No suitable habitat is present within the PSA.
Ferruginous hawk Buteo regalis	~/CSC MBTA	Found in open country, primarily prairies, plains and badlands; sagebrush, saltbush-greasewood shrubland, periphery of pinyon-juniper and other woodland, desert. Nests in tall trees or willows along streams or on steep slopes, in junipers, on cliff ledges, river-cut banks, hillsides, on power line towers, sometimes on sloped ground on the plains or on mounds in open desert. General-ly avoids areas of intensive agriculture or human activity. Prefer open grasslands and shrub-steppe communities. Uses native and tame grasslands, pastures, hayland, cropland, and shrubsteppe. Usually occupy rolling or rugged terrain. High elevations, forest interiors, narrow canyons, and cliff areas are avoided, as is parkland habitat in Canada. Landscapes with moderate coverage (<50%) of cropland and hayland are used for nesting and foraging. Occur on breeding areas from late February through early October.	Low (foraging)	There are known occurrences within 5 miles of the project site; there is a low potential for this species to forage within the PSA.
Swainson's hawk Buteo swainsoni	~/CT MBTA	Breeds in stands with few trees in Juniper-sage flats, riparian areas, and oak savannah. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Nests in valley oaks, cottonwoods, willows and a variety of other trees often in, or near,	Low (foraging)	There are known occurrences within 5 miles of the project site; there is a low potential for this species to forage within the PSA.

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
		riparian habitats; forages in grass-lands, irrigated pastures, and a variety of agri-cultural row and field crops; shows a preference for alfalfa. Breeds late March to late August.		
Northern harrier Circus cyaneus	~/CSC	Meadows, grasslands, open rangelands, fresh and saltwater emergent wetlands, desert sinks. Nests on ground, usually at marsh edge. Mostly nests in emergent wetland or along rivers or lakes, but may nest in grain fields, grasslands, or on sagebrush flats several miles from water. Breeds April- Sept	Low (foraging)	There are known occurrences within 5 miles of the project site; there is a low potential for this species to forage within the PSA.
Snowy egret Egretta thula	~/~ MBTA	(Rookery) A small white wading bird that inhabits marshes, lakes, ponds, lagoons, mangroves, and shallow coastal habitats. Nests in trees or shrubs or, in some areas, on ground or in marsh vegetation. Often nests with other colonial water birds. Nests over water or ground. Usually occurs in loose groups. Roosts usually communally. Eggs are laid usually April to May or June in north.	None	Suitable habitat is not present within the PSA. The South Folsom Canal does not represent suitable habitat for a snowy egret rookery therefore there is no potential for this species to occur within the PSA.
White-tailed kite Elanus leucurus	~/CFP	Nests in shrubs (in Delta) and trees adjacent to grasslands oak woodland, edges of riparian habitats. Roosts communally, resident year-round, and breeds February-October.	Low (foraging)	There are known occurrences within 5 miles of the project site; there is a low potential for this species to forage within the PSA.
Merlin Falco columbarius	~/CSC MBTA	Found in a wide variety of habitats including marshes, deserts, open woodlands, seacoasts, fields, near coastal lakes and lagoons, etc. Nests in conifer woodland or wooded prairie (e.g., groves of deciduous trees along rivers), including planted shelterbelts; often near water; in towns in some areas. Nests in trees in abandoned crow, magpie, hawk, or squirrel nest; also in natural tree cavity or abandoned	Low (foraging)	There is a low potential for this species to forage within the PSA.

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
		woodpecker hole, on bare cliff ledge, or scrape on ground. May roost in conifers in winter. Frequently returns to same nesting area in successive years.		
Bald eagle Haliaeetus leucocephalus	FT/CE/CFP MBTA	Permanent resident, and uncommon winter migrant, now restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity cos. Ocean shore, lake margins, and rivers, both nesting and wintering. Build stick nests within large tall trees and typically within 1 mile of permanent water. Wintering populations along major rivers and reservoirs in Yuba County. Breeds February to July.	None	No suitable habitat is present within the PSA. There are no known occurrences within 5 miles of the project site. Suitable habitat does not occur within the PSA, therefore the species is unlikely to be present.
Black-crowned night heron Nycticorax nycticorax	~/~ MBTA	A medium-sized wading bird. Salt water, shores of lakes, marshes, swamps, wooded streams, mangroves, ponds, lagoons, brackish, and freshwater situations. Roosts by day in mangroves or swampy woodland. Lays eggs in a platform nest in groves of trees near coastal marshes or on marine islands, swamps, marsh vegetation, clumps of grass on dry ground, orchards, and in many other situations. Nests usually with other heron species. Arrives in northern breeding areas March-May, departs by Sept-Nov. Breeding season varies geographically, occurs in spring-early summer in north.	None	Suitable habitat is not present within the PSA. The South Folsom Canal does not represent suitable habitat for a black-crowned night heron therefore there is no potential for this species to occur within the PSA.
Double-crested cormorant Phalacrocorax auritus	~/CSC MBTA	Brackish and freshwater habitats on lakes, rivers, swamps, bays and coasts.	None	No suitable habitat is present within the PSA.
Purple martin Progne subis	~/CSC	Nests from April to August in wooded low-elevation habitats such as valley foothill and montane hardwood, and riparian habitats. Found in a variety of open habitats during migration including grassland, wet meadow, and fresh emergent wetland, usually near water.	Low	Limited suitable habitat is present within the PSA.

Common Name (Scientific Name)	Status FED/ST/ CNPS	General Habitat Description	Potential to Occur	Rationale
Bank swallow Riparia riparia	~/CT MBTA	Primarily riparian and other lowland habitats in California. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils for nesting holes. Breeds early May to July.	None	No suitable habitat is present within the PSA. There are no known occurrences within 5 miles of the PSA. The banks of the Folsom South Canal were not suitable nesting sites due to the cemented bed and bank; therefore it is unlikely that the bank swallow occurs within the PSA.
Yellow-headed blackbird Xanthocephalus xanthocephalus	~/~ MBTA	(Nesting) Nests in freshwater emergent wetlands with dense vegetation and deep water; often along borders of lakes or ponds. They particularly like to live amongst cattails, tule, and bulrush. During migration and over the winter months, the Yellow-headed Blackbird is found in open, cultivated lands, in fields, and in pastures. Nesting timed with maximum emergence of aquatic insects.	None	No suitable habitat is present within the PSA. There are no known occurrences within 5 miles of the PSA.
Mammals				
American badger Taxidea taxus	~/CSC	Stout-bodied, primarily solitary species that hunts for ground squirrels and other small mammal prey in open grassland, cropland, deserts, savanna, and shrubland communities. Badgers have large home ranges and spend inactive periods in underground burrows. Badgers typically mate in mid- to late summer and give birth between March and April.	None	No suitable habitat is present within the PSA. There are no known occurrences within 5 miles of the PSA.

CODE DESIGNATIONS

Federal	State	CNPS	Other
FE = Listed as endangered under the Endangered Species Act	**CE** = Listed as endangered under the California Endangered Species Act	**1B** = Rare or Endangered in California and Elsewhere	**SLC** = Species of Local or Regional Concern or conservation significance
FT = Listed as threatened under the Endangered Species Act	**CT** = Listed as threatened under the California Endangered Species Act	**1A** = Plants presumed extinct in California	**MBTA** = Migratory Bird Treaty Act
FC = Candidate for listing (threatened or endangered) under Endangered Species Act	**CSC** = Species of Concern as identified by the CDFG	**List 2** = Rare, threatened, or endangered in California, but more common elsewhere.	**ESU** =Evolutionary Significant Unit is a distinctive population.
D = Delisted in accordance with the Endangered Species Act	**CFP** = Listed as fully protected under CDFG code	**List 3** = More information is needed about this plant**.**	
		List 4 = Plants with a limited distribution	

SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING WITHIN THE PROJECT AREA

Listed and Special-Status Plants

Based on the database search for special-status plants, the plants listed in **Table 3.4-1** had the potential to occur within the PSA; however these plants were not observed during field surveys and suitable habitat is not present within the PSA, therefore special-status plants do not have the potential to occur in the project area.

Trees

Several protected trees are located within the PSA. Within the median along Sunrise Boulevard in the northern portion of the PSA, there were four (4) interior live oaks. Within the median along Sunrise Boulevard in the southern portion of the PSA, there were five (5) sycamores and 12 interior live oaks (three [3] of which had a DBH of less than 6 inches). The City's tree preservation ordinance protects native and landmark trees including native oak trees, such as the interior live oaks, within the PSA.

Listed and Special-Status Wildlife

Based on a nine-quadrangle record search of the CNDDB and the USFWS species list for special-status wildlife, the species listed in **Table 3.4-1** had the potential to occur within the PSA. Based on field surveys, Swainson's hawk and other raptors and migratory birds have the potential to forage within the PSA, and are discussed further below.

Birds

Swainson's hawk (*Buteo swainsoni*)

The Swainson's hawk is a state-listed threatened species. This species has adapted to using agricultural land as prime foraging habitat. They will hunt insects as well as rodents and require low vegetation cover to facilitate their hunting. As they are unable to hunt in areas with tall vegetation, their hunting style is ideally suited for agricultural fields. Conversely, areas with little to no vegetation may not support a prey population. These hawks are known to use riparian woodland, oak woodlands, isolated trees, and even roadside trees as nesting sites and have been confirmed to nest in the area. There are 14 known occurrences of Swainson's hawk within a 10-mile radius of the PSA (CNDDB 2006a). This species has potential to utilize the PSA as foraging habitat.

Raptors and Other Migratory Birds

Raptors and their nests are protected under the Migratory Bird Treaty Act (MTBA) and Section 3503.5 of the California Fish and Game Code. Suitable raptor nesting habitat occurs north of the PSA along White Rock Road, near the intersection of the west bank access road along the Folsom South Canal. A red-tailed hawk nest was observed at this site. This nest site is adjacent to suitable foraging habitat in the open field adjacent and north of the PSA. A red-tailed hawk was observed foraging within the PSA; therefore, it is presumed that this nest is actively used by red-tailed hawks. The trees along Sunrise Boulevard and Monier Court, although not suitable habitat for raptor nests, may support suitable nesting habitat for migratory songbirds, which are protected under the MBTA.

DISCUSSION OF IMPACTS

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

SPECIAL-STATUS PLANTS

Less than Significant Impact. Special-status plants were not found within the project area; therefore the project is not expected to affect any federal or state candidate, sensitive or special plant species because none are known to occur or are anticipated at the project site.

SPECIAL-STATUS WILDLIFE

Swainson's Hawk

Less than Significant with Mitigation Incorporated. Open areas within and adjacent to the project area contain potential foraging habitat for the Swainson's hawk. There are no barriers to the species' movement into the study area. The proposed project site lays adjacent to a corridor of open space that follows the Folsom South Canal, and which has the potential to be used as foraging habitat by the Swainson's hawk. Implementation of the project would result in the loss of foraging habitat for Swainson's hawk, which is known to forage up to 10 miles from nest sites during the nesting season. Swainson's hawks are known to nest within 10 miles of the PSA (CNDDB 2006a). The loss of foraging habitat is a **potentially significant** impact unless the following mitigation measure is implemented:

Mitigation Measure

MM 3.4-1 To compensate for the permanent loss of potential foraging habitat, the City of Rancho Cordova shall preserve 0.75 acres of similar Swainson's hawk foraging habitat for each acre lost, within a ten-mile radius of the project site, or at a CDFG-approved Swainson's hawk preservation bank that services the project area.

Timing/Implementation: *Prior to start of construction activities.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure **MM 3.4-1** would ensure that potential impacts to Swainson's hawk would be minimized to **less than significant levels**.

MIGRATORY BIRDS

Less than Significant with Mitigation Incorporated. Implementation of the proposed project may result in the take of protected migratory bird nests if trees containing nesting birds are removed. The disturbance of the active nests from the project's construction

activities associated with the project may have a potentially significant impact unless mitigation measures are incorporated.

Mitigation Measure

MM 3.4-2 If proposed construction activities are planned to occur during the nesting seasons for avian species (typically March 1st through August 31st), the City shall retain a qualified biologist to conduct a focused survey for active nests of raptors and migratory birds within and in the vicinity (no less than 100-feet outside project boundaries, where possible) of the construction area no more than 30 days prior to ground disturbance or tree removal. If active nests are identified during preconstruction surveys, USFWS and/or CDFG shall be notified regarding the status of the nests. Furthermore, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a biologist deems disturbance potential to be minimal (in consultation with USFWS and/or CDFG). Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 100-feet around the nest for raptors and 50-foot radius for migratory birds) or alteration of the construction schedule. No action is necessary if construction will occur during the non-breeding season (generally September 1st through February 28th).

Timing/Implementation: No more than 30 days prior to start of construction.

Enforcement/Monitoring: City of Rancho Cordova Planning Department.

The implementation of the mitigation measure **MM 3.4-2** would reduce the project's impacts on native birds to **less than significant after mitigation**.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. Sensitive habitats include those that are of special concern to resource agencies and those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act. No sensitive habitats or riparian habitats have been identified within or near the project area. Therefore; the project would have no impact on these resources.

c) Would the project have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption or other means?

Less than Significant Impact. Construction activities associated with the roadway widening and extension are not anticipated to impact protected wetlands, as none were

found to be within the project study area. Therefore, no net loss of waters of the U.S. or wetlands would occur due to implementation of the proposed project.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact. There are no known wildlife corridors or native wildlife nursery sites within the project area. The site consists primarily of roadway, office buildings, homes, and open space and is considered to have a low biological value. Additionally, no suitable habitat was identified for resident, migratory, or wildlife fish species within the project area.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant with Mitigation Incorporated. The project is consistent with City of Rancho Cordova's Tree Preservation and Protection Ordinance. Trees within the project study area that would be subject to the Tree Preservation and Protection Ordinance may be removed and result in significant impacts unless the following mitigation measures are implemented:

MM 3.4-3a Prior to any groundbreaking activity, an Arborist Report shall be prepared by an arborist and submitted to the Planning Department for review. The report shall identify all native trees 6" diameter-at-breast-height (dbh) or larger and all non-native trees 18" dbh or larger that could be affected by the project. The report shall include the following minimum components:

- Tree species
- Tree dbh (diameter at breast height, measured at 4.5 feet above ground level)
- Tree dripline radius (measured from the trunk to the tip of the longest limb)
- Overall health and condition of each tree
- A map of the project site showing the location of each tree

Based on this report, the City Planning Department will determine which trees would be suitable candidates for protection, and which trees will need to be mitigated if removed. Trees that would be removed or otherwise harmed by the project shall be mitigated for pursuant to the City's Tree Preservation and Protection Ordinance.

Timing/Implementation: Prior to any groundbreaking activity.

Enforcement/Monitoring: City of Rancho Cordova Planning Department.

MM 3.4-3b Prior to any groundbreaking activity, a Replacement Tree Planting Plan shall be prepared by an arborist or landscape architect and shall be submitted to the City Planning Department for review and approval. The Replacement Tree Planting Plan(s) shall follow the standards set forth in the City of Rancho Cordova Municipal Code, and shall include the following minimum elements:

a) Species, size, and locations of all replacement plantings.

b) Method of irrigation

c) A tree planting detail, including a 10-foot depth-boring hole to provide for adequate drainage.

d) Planting, irrigation, and maintenance schedules.

e) Identification of the maintenance entity and a written agreement with that entity to provide care and irrigation of the trees for a 5-year establishment period and to replace any of the replacement trees which do not survive during that period.

The Plan shall include enough replacement plantings to allow for inch-for- inch replacement of all trees called out by the City as appropriate candidates for mitigation. Replacement inches will be calculated based on the following size categories.

- One J-pot = ½ inch dbh
- One 15-gallon tree = 1 inch dbh
- One 24-inch box tree = 2 inches dbh
- One 36-inch box tree = 3 inches dbh

In order to meet some of the mitigation requirement, existing native trees on-site proposed for removal that are less than 6" dbh and are in fair or better condition may be transplanted to the new planting area. If existing trees are successfully transplanted, mitigation requirements may be reduced.

No replacement tree shall be planted within 15 feet of a building foundation or swimming pool excavation. The minimum spacing for replacement trees shall be 15 feet on-center. J-pots may be planted closer at the discretion of the City Arborist or the consulting arborist.

Timing/Implementation: *Prior to any groundbreaking activity.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 3.4-3c To avoid damage during construction to trees proposed for preservation, the following protective measures are recommended:

1) A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.

    a. Protective fencing shall be installed at the driplines of the protected trees prior to the start of any construction work (including grading or placement of vehicles on site), in order to avoid damage to the trees and their root systems. This fencing may be installed around the outermost dripline of clusters of trees proposed for protection, rather than individual trees. Fencing shall be shown all project plans.

    b. No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of protected trees. A laminated sign indicating such shall be attached to fencing surrounding trees on-site.

    c. No grading (grade cuts or fills) shall be allowed within the driplines of protected trees.

    d. Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any protected tree.

    e. No trenching shall be allowed within the driplines of protected trees. If it is absolutely necessary to install underground utilities within the dripline of a protected tree, the utility line shall be bored and jacked under the supervision of a certified arborist.

    f. The construction of impervious surfaces within the driplines of protected trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system shall be installed under the supervision of a certified arborist. Wherever possible, pervious concrete shall be used as an alternative to traditional concrete, when it is required under tree driplines.

    g. No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the driplines of protected trees. An above ground drip irrigation system is recommended.

h. Landscaping beneath protected trees may include non-plant materials such as bark mulch or wood chips. The only plant species that shall be planted within the driplines of protected trees are those that are tolerant of the natural environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants.

2) Any protected trees on the site, which require pruning, shall be pruned by an arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute (ANSI) A300 pruning standards and the International Society of Arboriculture (ISA) "Tree Pruning Guidelines."

3) No signs, ropes, cables (except those which may be installed by an arborist to provide limb support) or any other items shall be attached to the protected trees.

Timing/Implementation: *Prior to and during construction activities.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measures **MM 3.4-3a, 3b,** and **3c,** which are consistent with the City of Rancho Cordova's Tree Preservation and Protection Ordinance, would ensure that impacts to local policies and ordinances would be **less than significant**.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?

No Impact. The City of Rancho Cordova does not at present have an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or State habitat conservation plan. Therefore, there would be no impact to these types of plans.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.5	**CULTURAL RESOURCES**	Would the project:			
a)	Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	☐	☐	☐	☒
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☒	☐
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☐	☒	☐
d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed project will receive federal funding, therefore archaeological and historical investigations were conducted to comply with review criteria presented in the January 2004 *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (PA). The International Drive Extension from Kilgore to Sunrise Project is also subject to the legal requirements of the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.) 1970, as amended.

City of Rancho Cordova Cultural Resources staff conducted archaeological and historic investigations for the International Drive Extension from Kilgore to Sunrise Project in September 2006. Archaeological and historic investigations included: consultation with individuals and groups identified by the Commission; a sacred lands search conducted by the Native American Heritage Commission; and pedestrian surface survey of the Area of Potential Effects (APE) for the International Drive Extension from Kilgore to Sunrise Project. Previous and current archaeological investigations for the project area did not identify any cultural resources (e.g., prehistoric and/or historic sites or buildings constructed prior to 1958).

The proposed project would extend International Drive, create a bridge over the Folsom South Canal, and widen portions of both International Drive and Sunrise Boulevard The existing approach roadway, utilities, curbs, landscaping, street lighting, drainage systems, and traffic striping would be modified as necessary to accommodate the lengthened and widened roadway.

ARCHAEOLOGICAL RESOURCE IDENTIFICATION

The record search for the project identified a previous survey (cf., Peak & Associates) with negative results, and identified the project as being located within the American River Gold Mining District.

Archaeological and historical investigations for the International Drive Extension from Kilgore to Sunrise Project did not identify any prehistoric sites or historical archaeological sites in the project APE. Moreover, the project area was found to be heavily disturbed by mining, reclamation, commercial and residential construction, and roadway construction. Therefore, the archaeological sensitivity of the project area is generally low, and the vertical or subsurface project APE primarily consists of disturbed areas. In summary, there are no prehistoric sites, historic sites, or isolated artifacts within the project APE. The APE primarily consists of previously disturbed contexts.

DISCUSSION OF IMPACTS

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

***No Impact*.** Archeological and historical investigations did not identify any cultural resources (e.g. prehistoric sites, historic sites, or buildings) located within the project area that meet the CEQA criteria as presented in §15064.5; therefore, the proposed project would have no impact on a historical resource.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less Than Significant Impact. As discussed above, there are no identified historical or archaeological resources, as defined in §15064.5, located within the project area. Therefore, the proposed project should have no impact on an archaeological resource. However, should a previously unidentified or unanticipated archaeological resource be discovered during project construction, the Cultural and Historic Resources Element Policy CHR.1.3 - Action CHR.1.3.2 of the City of Rancho Cordova General Plan requires that the Planning Department be notified immediately and all construction in the vicinity must stop until an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology or a paleontologist evaluates the finds and recommend appropriate action.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Less Than Significant Impact. There are no identified unique paleontological resources or sites, or unique geological features located within the project. Therefore, the proposed project should have no impact on a unique paleontological resource or site, or a unique geological feature. However, should a previously unidentified or unanticipated paleontological resource be discovered during project construction, the City of Rancho Cordova General Plan Cultural and Historic Resources Element Policy CHR.1.3 – Action CHR.1.3.2 would be followed.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. The proposed project would be subject to State law regarding the discovery and disturbance of human remains; therefore, potential impacts from the proposed project are considered less than significant.

Although it is not anticipated that any human remains would be encountered during construction of the proposed project, should any previously unidentified or unanticipated human remains be discovered during project construction, the City of Rancho Cordova General Plan Cultural and Historic Resources Element Policy CHR.1.3 – Action CHR.1.3.2 requires that the Planning Department be notified immediately. All construction in the vicinity must stop and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.6 GEOLOGY AND SOILS Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

REGIONAL GEOLOGY

The proposed project site is located in the Great Valley geomorphic province in Central California. The filling of a large structural trough or downwarp of the underlying bedrock formed this province. The Great Valley is an elongate, northwest-trending structural trough situated between the Sierra Nevada Mountains on the east and the Coast and Cascade Ranges on the west. The Great Valley has been and is presently being filled with sediments primarily derived from the Sierra Nevada. The greatest depth of sediments lay along the eastern margin of the trough.

PROJECT GEOLOGY

The project site is located in a relatively flat area at an approximate surface elevation of 115 feet above Mean Sea Level. The general topographic gradient is in a general northwest direction. Soils in the area are primarily composed of Xerarents and Xerorthents soil types.

FAULTS AND SEISMICITY

Sacramento County is less affected by seismic events and other geologic hazards than other portions of the State. Nevertheless, some property damage has occurred in the past. The damage that was experienced has largely been the result of major seismic events occurring in adjacent areas, especially the San Francisco Bay area and, to a lesser extent, the foothills of the Sierra Nevada Mountain Range. The areas of Sacramento County most vulnerable to seismic and geologic hazards are those areas subject to liquefaction, shaking, and subsidence. The Central Valley, like most of California, is a seismically active region.

DISCUSSION OF IMPACTS

a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Less than Significant Impact. There are no known faults crossing through the proposed project site or in the vicinity of the project. The site is not located within an Alquist-Priolo earthquake hazard zone. Therefore, the project would have less than significant impacts concerning fault rupture hazards.

ii) Strong seismic ground shaking?

Less than Significant Impact. Although the project area is not located within an Alquist-Priolo earthquake hazard zone, the project would be designed and constructed in accordance with the requirements of the Uniform Building Code. As a result, the risk of adverse effects from ground shaking would be reduced to a minimum and is considered to be less than significant.

iii) Seismic-related ground failure, including liquefaction?

No Impact. Liquefaction is most likely to occur in deposits of water-saturated alluvium or similar deposits of artificial fill. Within Sacramento County, the Sacramento downtown area and the Delta are the only areas that are subject to potentially significant liquefaction problems. The City of Rancho Cordova is not within these areas.

iv) Landslides?

No Impact. The project site and the surrounding vicinity are located on a flat area containing no major slopes. The maximum land surface slope within the Rancho Cordova Planning Area generally ranges from 0 to 5%.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. The proposed project would be comprised of extending International Drive over the South Folsom Canal where it would terminate at Sunrise Boulevard. Project construction would include minor amounts grading. Grading activities, if not completed properly, could result in soil erosion or loss of top soil due. The project, however, would be subject to the City Land Grading and Erosion Control Ordinance, and water quality protection requirements that would insure that soil exposed or disturbed by grading activities is properly stabilized and contained on the project site during construction and after completion of the project, thus minimizing the project's impacts from soil erosion or loss of topsoil.. Due to the limited nature of earth movement in the project area and the requirements for soil stabilization and containment dictated by the City's Land Grading and Erosion Control Ordinance and various water quality protection laws and ordinances, it is not anticipated that the project would result in substantial soil erosion or the loss of topsoil.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant Impact. The project site is relatively flat, and is not located on a geologic unit or soil that is unstable. Construction would not require major earth moving activities to accommodate the project; therefore, unstable earth conditions or significant changes to the geologic substructure or topography would not occur.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less than Significant Impact. Soils with high clay content are usually expansive. Minerals in certain clays swell with increased moisture content and then contract during dry periods. The project site contains soils with high clay content, however they have not been identified as expansive. All bridge construction would be designed so that grades are constructed in such a way as to prevent water from collecting on or adjacent to pavements, thereby discouraging soil saturation adjacent to the roadbed. Therefore, the project would be considered to have a less than significant impact.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. Neither septic tanks nor alternative wastewater disposal systems are part of the proposed project. Therefore, there is no impact associated with septic tanks or alternative wastewater disposal systems.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.7 HAZARDS AND HAZARDOUS MATERIALS Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22 of the California Code of Regulations (CCR) as follows:

> *A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.* (California Code of Regulations, Title 22, Section 66261.10)

Chemical and physical properties cause a substance to be considered hazardous. Such properties include toxicity, ignitability, corrosivity, and reactivity. CCR, Title 22, Sections 66261.20-66261.24 define the aforementioned properties. The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Under Government Code Section 65962.5, the California Department of Toxic Substances Control (DTSC) maintains a list of hazardous substance sites. This list, referred to as the "Cortese List", includes CALSITE hazardous material sites, sites with leaking underground storage tanks, and landfills with evidence of groundwater contamination. In addition, the Sacramento County Environmental Management Department maintains records of toxic or hazardous material incidents, and the Central Valley Regional Water Quality Control Board (RWQCB) keeps files on hazardous material sites.

Most hazardous materials regulation and enforcement in Sacramento County is managed by the Sacramento County Environmental Management Department. Most hazardous materials regulation and enforcement in the City of Rancho Cordova is overseen by the Sacramento County Environmental Management Department that refers large cases of hazardous materials contamination or violations to the Central Valley RWQCB and the California State Department of Toxic Substances Control (DTSC). It is not at all uncommon for other agencies such as the Air Pollution Control District and both the Federal and State Occupational Safety and Health Administrations (OSHA) to become involved when issues related to hazardous materials arise.

Several hazardous material databases were searched to determine the potential for the presence of hazardous materials and hazardous waste in the project area. These databases are listed below.

FEDERAL RECORD SOURCES:

- NPL – National Priority List;
- CERCLIS – Comprehensive Environmental Response, compensation, and Liability Information System;
- ERNS – Emergency Response Notification System;
- TRIS – Toxic Chemical Release Inventory System;
- SNAP – Superfund NPL Assessment Program Database;
- EPA's Envirofacts – Environmental Protection Agency Envirofacts Database.

STATE RECORD SOURCES:

- CAL-SITES – Contains potential or confirmed hazardous substance release properties;
- CORTESE – "Cortese" Hazardous Waste and Substances Sites List;
- SWF/LF (SWIS) – Solid Waste Information System;
- LUST – Leaking Underground Storage Tank Information System;
- CA UST – Active Underground Storage Tank Facilities.

DISCUSSION OF IMPACTS

a) Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Less than Significant Impact. The proposed project would not include the routine transport, use, or disposal of hazardous materials that could create a significant hazard to the public. Small amounts of hazardous materials would be used during construction activities (i.e., fuel, solvents, roadway resurfacing and re-stripping materials, and equipment maintenance materials). As indicated above, hazardous materials would primarily be used during construction of the project and are not anticipated to result in any adverse health or environmental impact to people in the vicinity of the project site. Additionally, any hazardous material uses would be required to comply with all applicable local, state, and federal standards associated with the handling of hazardous materials.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant with Mitigation Incorporated. Construction activities that may be associated with the release of hazardous materials would include refueling and minor maintenance of construction equipment on location, which could lead to minor fuel and oil spills. The use and handling of hazardous materials during construction activities would occur in accordance with applicable federal, state, and local laws including California Occupational Health and Safety Administration (CalOSHA) requirements. However, should any fuel and/or oil spills occur in areas near sensitive receptors including waterways, these could be considered potentially significant unless the following mitigation measures are incorporated:

Mitigation Measure

MM 3.7-1 Prior to start of construction, the construction contractor shall designate staging areas where fueling and oil-changing activities will take place. The staging area(s) shall be reviewed and approved by City of Rancho Cordova's Environmental Mitigation Monitor and the Storm Water Pollution and Prevention Manager prior to the start of construction. No fueling and oil-changing activities shall be permitted outside the designated staging areas. The staging areas, as much as practicable, shall be located on level terrain and away from sensitive land uses such as residences, day care facilities, and schools. Staging areas shall not be located near any stream, channel, or wetlands. The proposed staging areas shall be identified in the Storm Water Pollution Prevention Plan (SWPPP).

Timing/Implementation: *Prior to start of construction and during project construction.*

Enforcement/Monitoring: *City of Rancho Cordova Development Services.*

Implementation of the above mitigation measure would confine fueling and oil-changing activities to specific areas that would avoid potential entry of spills into local water systems or onto soils. With this measure and compliance with other applicable hazardous material regulations, potential impacts are considered **less than significant with mitigation incorporated***.*

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. Currently there are no existing or proposed, elementary, middle, or high schools within one-quarter (0.25) mile of the project area; therefore, no impact is expected concerning hazardous emissions, materials, substances, or wastes near schools.

d) Would the project be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant Impact. The City of Rancho Cordova completed a hazardous materials list database search on February 23, 2006 and found that four Cortese sites are located within approximately 0.625 miles of the project site, however it is unlikely that the project site would be affected by contamination from materials. Results from a Phase 1 assessment preformed by Kleinfelder (February 2006) concluded that residual diesel oil from the Vulcan Materials Company was found in excavated soil from the project site, but would not affect humans or the environment. The files reviewed at the Sacramento County Environmental Management Department (SCEMD) did not indicate that location of the placement of residually impacted soil. On October 23, 2002 the SCEMD issued the facility a No Further Action Required Letter. In addition, the area surrounding the project area has been extensively and recently disturbed, it is unlikely that any new undiscovered hazardous materials would be discovered and disturbed by the International Drive Extension Project.

e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?

Less than Significant Impact. Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the imaginary surfaces surrounding an airport. The nearest airport/airstrip is the Mather Airport, located approximately 1.5 miles southwest of the project site in Mather, CA; however, the project would not include any structures or equipment anticipated to penetrate the navigable airspace of the Mather Airport.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Less than Significant Impact. See discussion e), above. The nearest airstrip is located approximately 1.5 miles southwest of the project site. Normal operations of this facility would not result in safety related or other adverse impacts to people working at or near the project area.

g) Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. Upon incorporation, the City of Rancho Cordova adopted the Sacramento County Multi-Hazard Disaster Plan (SCMDP), which was established to address planned response to extraordinary emergency situations associated with natural disasters and technological incidents. The Plan focuses on operational concepts relative to large-scale disasters, which can pose major threats to life and property requiring unusual emergency responses. The SCMDP was designed to include Sacramento County as a part of the California Standardized Emergency Management System (SEMS), which assigns responsibilities to support implementation of the SCMDP and to ensure successful response during a major disaster.

The project would not impede or conflict with the objectives or policies of the identified emergency response plans and evacuation plans. The addition of a bridge would effectively add an additional route across the Folsom South Canal, major impediment to

east/west circulation in the City, and would result in an improvement for response to disaster.

h) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The project area is primarily residential to the south and Industrial and Office space to the east and west and open space to the north. As such, the site is not adjacent to or in close proximity to wildland areas. Additionally, the Rancho Cordova Community Services District Fire Department would provide fire and emergency services at the site in the event of an emergency.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.8 HYDROLOGY AND WATER QUALITY	Would the project:			
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The project area includes the Folsom South Canal, which provides water for municipal and industrial use in Sacramento and San Joaquin Counties. The canal originates at Nimbus Dam, on the American River, in Sacramento County, and extends southward.

The project proposes to extend International Drive across the Folsom South Canal where it will terminate at Sunrise Boulevard. The project will cross over the Folsom South Canal and would include sidewalks, gutters, and curbs. The volume and direction of water flow in the area would not be altered by the project.

The project area is within the jurisdictional boundaries of the Central Valley Regional Water Quality Control Board (RWQCB). The Central Valley RWQCB develops and enforces water quality objectives and implementation plans that safeguard the quality of water resources in its region. Specifically, the RWQCB identifies potential water quality concerns, confirms and characterizes water quality problems through assessments, remedies problems through imposing or enforcing appropriate measures, and monitors problem areas to assess effectiveness of remedial measures.

DISCUSSION OF IMPACTS

a) Would the project violate any water quality standards or waste discharge requirements?

Less than Significant with Mitigation Incorporated. Implementation of the proposed project could result in the violation of water quality standards or water discharge requirements during the project construction period unless mitigation is incorporated.

Potential water quality impacts would primarily occur during construction of the project. Construction-related impacts to water quality are potentially significant. Mitigation measure **MM 3.8.1**, described below, specifies actions to prevent violation of water quality standards.

Measures would also be included in the grading plans that would minimize erosion potential and water quality degradation for the project area in accordance with the City's Land Grading and Erosion Control Ordinance and the NPDES requirements. The purpose of the NPDES permit is to protect water quality from development areas that would discharge into a surface water body. During construction of the project, the City's construction contractor must eliminate non-storm water discharges to storm water

systems, the contractor must develop and implement a Storm Water Pollution Prevention Plan (SWPPP) and perform monitoring of discharges to storm water systems. The State has published a set of Best Management Practices (BMPs) for both pre- and post-construction periods, which would be applied to the project. The contractor would identify the appropriate BMPs in coordination with the City's SWPPP Manager for the proposed project.

Mitigation Measure

MM 3.8-1 Prior to construction, a sediment control plan and a SWPPP shall be prepared by the contractor and submitted to the City for approval. The sediment control plan shall be designed to limit the effects of soil erosion and water degradation during construction. This plan shall be prepared and implemented in accordance with the requirements of the RWQCB's NPDES permit requirements, and shall include (but not be limited to) the following measures:

- Use of sediment control measures that utilize sediment traps, barriers, covers, or other methods approved by the Regional Water Quality Control Board;
- Plans for appropriate deposition and storage of excavated material;
- Construction phasing; and
- Cover all stockpiles of fill material during extended periods of rain.

Timing/Implementation: *During project design and construction.*

Enforcement/Monitoring: *City of Rancho Cordova Development Services.*

Implementation of the above mitigation measure would ensure that potential water quality impacts are reduced to **less than significant** levels.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less than Significant Impact. Relatively minor amounts of additional pavement would be added as a result of the project. The impact of the proposed roadway extension would be minimal in terms of adverse effects on groundwater resources. In a Phase 1 assessment preformed by Kleinfelder (February 2006) the depth to groundwater was depicted at approximately 30 feet above Mean Sea Level. Therefore, based on the surface elevation of approximately 115 feet above Mean Sea Level, depth to

groundwater is estimated at approximately 85-feet below ground surface. The proposed project does not contain elements that either add to or draw from groundwater.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?

Less than Significant Impact. The project area within the Folsom South Canal would be subject to some excavation to provide for the additional length of the new bridge. Additionally, small areas adjacent to the bridge could be subject to minor grading. Excavation and grading would be conducted pursuant to the City of Rancho Cordova's Land Grading and Erosion Control Ordinance, the requirements of the Clean Water Act, and the project's Storm Water Pollution Prevention Plan (SWPPP), to ensure that drainage through and near the project area follows historic drainage patterns, and historic water volumes and velocity do not change from existing conditions; therefore, less that significant impacts from erosion and siltation are expected from project implementation.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

Less than Significant Impact. Refer to discussion c), above. Relatively minor amounts of new pavement would be added as a result of the project. Although added impervious surfaces would constitute slight increases in runoff, the increase would not be substantial and the project area would be supplied with adequate storm drains; therefore, it is anticipated that the project would result in less than significant impacts from on- or off-site flooding.

e) Would the project create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact. The project would cause a very slight increase in the quantity of runoff generated in a storm event through the increase in impervious surface area associated with the added pavement. The quantity of additional run-off generated from the project would not be substantial, and storm drains would be sized and constructed in accordance with City of Rancho Cordova standards.

The operation of the proposed project would include use of the new bridge by motor vehicles, and other uses associated with local roadways. These uses may result in the deposit of various materials on the bridge roadway and adjacent areas that constitute urban pollution. These materials include heavy metals, engine oil and other automobile wastes (e.g., antifreeze, transmission fluid, rubber, etc.) that can be transported in surface water runoff during storm events. These additional sources of polluted runoff, however, would be minimal.

f) Would the project otherwise substantially degrade water quality?

Less than Significant Impact. As discussed in e) above, the project area would accumulate small quantities of heavy metals, oil and grease, as well as other chemicals used by motor vehicles that may be released during first rains. The amount of additional polluted runoff generated in the project area would be insignificant compared to existing conditions.

The potential for impacts to ground water quality is unlikely due to the low permeability of the soils in the area. Low permeability soils tend to prevent leaching of contaminants into the ground water aquifer in quantities that could degrade the ground water quality. Therefore, impacts related to water quality are considered to be less than significant.

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Less than Significant Impact. While there is housing adjacent to the project area, the housing is currently outside of the FEMA 100-year flood hazard area. Implementation of the project would not substantially alter Folsom South Canal's historic flow direction, volume, or velocity from existing conditions. Implementation of the project would not result in changes to the 100-year flood hazard area, and no changes to flood threats at nearby housing would occur.

h) Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?

No Impact. The proposed project would extend and widen an existing roadway and would require the installation of a bridge across the Folsom South Canal.

The new bridge would be designed and constructed to adequately accommodate through traffic on International Drive's extended 6-lane roadway. All work, including installation of the new bridge support columns, would be placed outside of the Folsom South Canal waterway; therefore, it is anticipated that the project would have no impact on impeding or redirecting flood flows within a 100-year flood hazard area.

i) Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?

No Impact. See responses g) and h), above. The project would not create new risk of flooding in or near the project area. Additionally, the project site is not located on a levee or dam, and would have no impact from flooding as a result of the failure of a levee or a dam.

j) Would the project be subject to inundation by seiche, tsunami or mudflow?

No Impact. The proposed project area is not located near any ocean coast or seiche hazard areas and would not involve the development of residential or other sensitive land uses in or near these areas. Therefore, the project would not expose people to potential impacts involving seiche or tsunami. No potential for mudflows is anticipated. Therefore, there is no impact associated with the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.9 LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The proposed project area is located on International Drive, which runs in an east/west direction perpendicular to Kilgore Road where it terminates. Land uses in the project area include residential to the south, open space and Industrial to the north, and Industrial and Office Space to the west and east.

DISCUSSION OF IMPACTS

a) Would the project physically divide an established community?

No Impact. The proposed project would extend International Drive to terminate at Sunrise Boulevard from its current terminus at Kilgore Road. The extended International Drive is planned as a six-lane roadway, and would include a new bridge over the Folsom South Canal in the eastern portion of the project area. The proposed project is located in a developed area of Rancho Cordova. In addition, the extension of International Drive would provide continuous access to those vehicles traveling on International Drive to Sunrise Boulevard. The proposed project would not physically divide an establish community, but would instead improve its traffic circulation.

b) Would the project conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed project would comply with all Rancho Cordova Draft General Plan policies, as they relate to road projects. The project would be consistent with the City of Rancho Cordova's Draft General Plan, and Draft Circulation Plan.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. No habitat conservation plans or natural community conservation plans are in place now or applicable to the project area. The project would have no impact with regard to these types of plans.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.10 MINERAL RESOURCES Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Mineral extraction activities do not occur in the vicinity of the project site. Neither International Drive or Sunrise Boulevard, nor other roadways in the vicinity of the project, serve as routes for traffic involved in mineral extraction activities.

DISCUSSION OF IMPACTS

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The proposed project would not use or extract any mineral or energy resources and would not restrict access to known mineral resource areas. The proposed road extension would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner, or result in the loss of availability of a known mineral resource. Therefore, there would be no impact created from the implementation of the proposed project.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. Refer to response a), above. The project would have no impact on mineral resources.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.11 NOISE Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or of applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

NOISE-SENSITIVE LAND USES

Noise-sensitive land uses generally include those uses where exposure to noise would result in adverse effects, as well as uses where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Other noise-sensitive land uses include hospitals, convalescent facilities, parks, hotels, churches, libraries, and other uses where low interior noise levels are essential.

Noise-sensitive land uses located near the proposed project site consist of a residential subdivision located adjacent to and south of the proposed International Drive extension

alignment. An existing 6-foot tall sound wall extends along the northern boundary of the subdivision. A commercial office use is located north of the proposed alignment, at the northeast corner of International Drive and Kilgore Road.

AMBIENT NOISE LEVELS

An ambient noise survey was conducted on June 2, 2006 to document the existing noise environment in the project area. Short-term (i.e., 15-minute) noise level measurements were conducted using a Larson Davis model 820 sound level meter. Ambient noise measurement locations and corresponding measured values (i.e., L_{eq}, L_{max}, and L_{min}) are depicted in **Figure 3.11.1**.

Based on the monitoring conducted, ambient average-hourly noise levels (in L_{eq}) near the boundaries of the project site range from the upper-50's to the low-60's, dependent primarily on distance from nearby major roadways. The dominant noise source in the project area is vehicular traffic on area roadways, including Sunrise Boulevard, Kilgore Road, and International Drive (east of Kilgore Road). Aircraft overflights, primarily associated with the nearby Mather Airport, also contribute to the ambient noise environment. Measured ambient noise levels at sensitive receptors adjacent to the project area are depicted in **Figure 3.11.1**.

ACOUSTIC FUNDAMENTALS

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound, as described in more detail below, is mechanical energy transmitted in the form of a wave because of a disturbance or vibration.

Amplitude

Amplitude is the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source, results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person.

Frequency

Frequency is the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. Sound waves below 16 Hz or above 20,000 Hz cannot be heard at all, and the ear is more sensitive to sound in the higher portion of this range than in the lower. To approximate this sensitivity, environmental sound is usually measured in A-weighted decibels (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA.

Characteristics of Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks and airplanes, and stationary sources, such as construction sites,

machinery, and industrial operations. Noise generated by mobile sources typically attenuates at a rate between 3.0 to 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. For mobile transportation sources, such as highways, hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance from the source. Noise generated by stationary sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source.

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise, but are less effective than solid barriers.

Noise Descriptors

The selection of a proper noise descriptor for a specific source is dependent upon the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average-hourly noise level (in L_{eq}) and the average-daily noise levels (in L_{dn}/CNEL). Common acoustical terms and descriptors are summarized in **Table 3.11.1**.

T:_CS\Work\Rancho Cordova, City of\International Drive Extension_Kilgore to Sunrise-24-0118-002\Figures\Figure 3.11.1 - Existing Conditions.ai, September 2007

Image Source: Wood Rogers 2006

Existing 6-Foot Sound Barrier

Ambient Noise Monitoring Locations

Leq	Average-Hourly Daytime Noise Level (All Sources)
Lmin	Minimum Daytime Noise Level
Lmax	Maximum Daytime Noise Level

N

Not to Scale

Source: Ambient Air & Noise Consulting, 2007

City of Rancho Cordova
Planning Department

Figure 3.11.1
Existing Conditions

TABLE 3.11.1
COMMON ACOUSTICAL TERMS AND DESCRIPTIONS

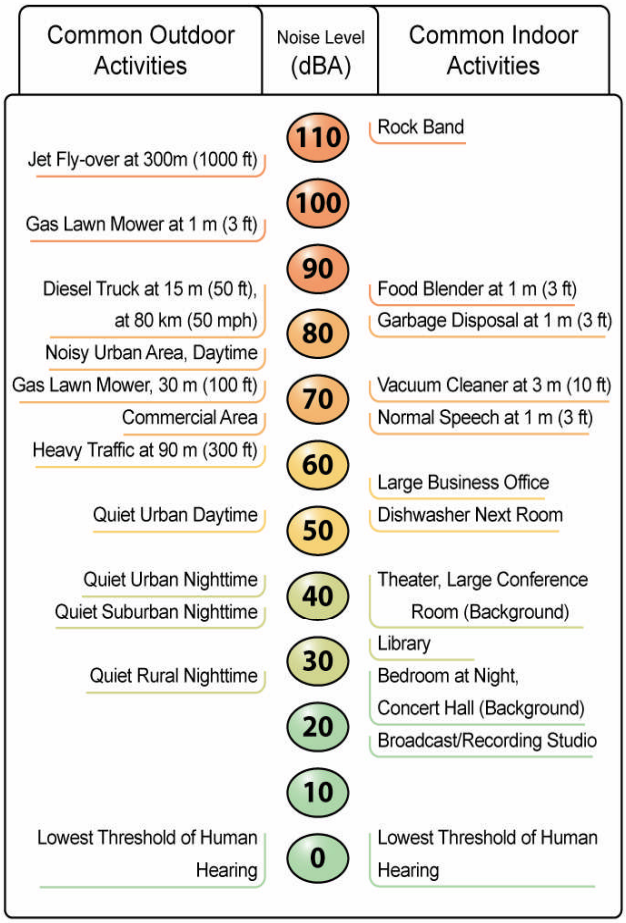
Descriptor	Definition
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise or sound at a given location, typically defined by the Leq level.
Noise	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
Decibel (dB)	A unit-less measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to referenced sound pressure amplitude. The reference pressure is 20 micro-pascals.
A-Weighted Decibel (dBA)	An overall frequency-weighted sound level in decibels which approximates the frequency response of the human ear.
Energy Equivalent Noise Level (Leq)	The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value (in dBA) is calculated.
Minimum Noise Level (Lmin)	The minimum instantaneous noise level during a specific period of time.
Maximum Noise Level (Lmax)	The maximum instantaneous noise level during a specific period of time.
Day-Night Average Noise Level (DNL or Ldn)	The 24-hour Leq with a 10 dBA "penalty" for noise events that occur during the noise-sensitive hours between 10:00 p.m. and 7:00 a.m. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours to account for increases sensitivity to noise during these hours.
Community Noise Equivalent Level (CNEL)	The CNEL is similar to the Ldn described above, but with an additional 5 dBA "penalty" added to noise events that occur between the hours of 7:00 p.m. to 10:00 p.m. The calculated CNEL is typically approximately 0.5 dBA higher than the calculated Ldn.
Single Event Level (SEL)	The level of sound accumulated over a given time interval or event. Technically, the sound exposure level is the level of the time-integrated mean square A-weighted sound for a stated time interval or event, with a reference time of one second. Often also referred to as the Single Event Noise Exposure Level (SENEL).

Source: Ambient Air Quality and Noise Consulting, September 11, 2007

HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels. Typical community noise sources and associated noise levels are summarized in **Figure 3.11.2**.

FIGURE 3.11.2
TYPICAL COMMUNITY NOISE SOURCES AND ASSOCIATED NOISE LEVELS



Source: Caltrans 2007

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted: the so-called "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. Regarding increases in A-weighted noise levels, knowledge of the following relationships will be helpful in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected. An increase of 5 dB is typically considered substantial.

- A 10-dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

REGULATORY SETTING

Federal, state and local governments have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise. The applicable standards and guidelines for this study area are discussed below.

State Plans, Policies, Regulations, and Laws

Federal Highway Administration/California Department of Transportation

The Federal Highway Administration has adopted procedures for the abatement of highway traffic noise, as codified in 23 Code of Federal Regulations, Part 772. These procedures, which have also been adopted by the California Department of Transportation (Caltrans), identify noise abatement criteria (NAC) that are applied to specific land uses, based on sensitivity to noise. These NAC are summarized in **Table 3.11.2** (Caltrans 2006).

In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects*, (October 1998), a noise impact occurs when the future noise level with the project results in a substantial increase in the noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC (Caltrans 2006).

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be "reasonable and feasible" at the time of final design are incorporated into the project plans and specifications. Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is "reasonable and feasible". Accordingly, a minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered "feasible". Other considerations include topography, access requirements, other noise sources and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is "reasonable" include: residents' acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978 and the cost per benefited residence (Caltrans 2006).

TABLE 3.11.2
FHWA AND CALTRANS NOISE ABATEMENT CRITERIA

Activity Category	Hourly Leq	Description of Activity Category
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Categories A, B, and C are applied to exterior areas of frequent human activity, and typically exclude transient areas such as parking lots, golf courses, etc. Interior NAC (Category E) are used if exterior areas are physically shielded from the roadway, or if human exterior activity areas are not present. Predicted noise levels within 1.0 dBA of NAC would be considered noise impacted.

Source: Caltrans 2006

Local Plans, Policies, Regulations, and Laws

Rancho Cordova General Plan

The City's General Plan policies applicable to the proposed project, along with the proposed project's consistency with applicable General Plan policies, are summarized in **Table 3.11.3.** Although this report analyzes the project's consistency with the City General Plan pursuant to State California CEQA Guidelines Section 15125(d), final determination of the project's consistency with the City's General Plan rests with the City Council.

The City's applicable noise standards are summarized in **Table 3.11.4**. Per the City's noise standards for residential land uses, noise created by new transportation noise sources should be mitigated so as not to exceed 60 dB L_{dn} /CNEL at the outdoor activity areas of any affected residential land uses. When a practical application of the best available noise-reduction technology cannot achieve the 60 dB L_{dn} /CNEL standard, then an exterior level of 65 dB L_{dn}/CNEL may be allowed in outdoor activity areas, provided that interior noise levels do not exceed the City's noise standards. Additionally, the City's noise standards (Action 2.2.1) include allowances for variable increases in noise created by transportation projects depending on the existing noise levels in the area. The City's noise standard for office buildings is based on an interior average-hourly noise standard of 45 dBA L_{eq} (refer to **Table 3.11.4**).

TABLE 3.11.3
CITY OF RANCHO CORDOVA GENERAL PLAN
APPLICABLE GENERAL PLAN POLICIES AND CONSISTENCY DETERMINATION

General Plan Policy	Consistent with General Plan Policy?	Discussion
Policy N.1.4 - Mitigate noise created by proposed non-transportation noise sources to comply with the City's noise standards to the maximum extent feasible. **Action N.1.4.1** - Limit construction activity to the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends when construction is conducted in proximity to residential uses.	Yes, With Proposed Mitigation Measures	Implementation of proposed mitigation would limit hours of construction to those noted in Action N.1.4.1.
Policy N.1.5 - Mitigate noise created by the construction of new transportation noise sources (such as new roadways or new light rail service) to the maximum extent feasible to comply with the City's standards.	Yes, With Proposed Mitigation Measures	Implementation of proposed mitigation would reduce predicted traffic noise levels to comply with the City's noise standards.
Policy N.1.7 - To the extent feasible and appropriate, the City shall require the use of temporary construction noise control measures for public and private project that may include the use of temporary noise barriers, temporary relocation of noise-sensitive land uses or other appropriate measures.	Yes, With Proposed Mitigation Measures	Implementation of proposed mitigation would require additional measures, as deemed necessary, to reduce construction noise levels.
Policy N.2.2 - Ensure that operational noise levels of new roadway projects will not result in significant noise impacts. **Action N.2.2.1** - Assess the significance of the noise increase of all roadway improvement projects in existing areas according the following criteria: • Where existing traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +5 dB Ldn increase in noise levels due to roadway improvement projects will be considered significant; and • Where existing traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +3 dB Ldn increase in noise levels due to roadway improvement projects will be considered significant; and • Where existing traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +1.5 dB Ldn increase in noise levels due to roadway improvement projects will be considered significant.	Yes, With Proposed Mitigation Measures	Implementation of proposed mitigation would reduce predicted traffic noise levels to comply with the City's noise standards.

Source: City of Rancho Cordova, 2006

TABLE 3.11.4
CITY OF RANCHO CORDOVA
MAXIMUM TRANSPORTATION NOISE EXPOSURE

Land Use	Outdoor Activity Areas (1) (dBA CNEL/ L_{dn})	Interior Spaces	
		dBA CNEL/ L_{dn}	dBA L_{eq} (2)
Residential	60(3)	45	--
Residential subject to noise from railroad tracks, aircraft overflights, or similar noise sources which produce clearly identifiable, discrete noise events (e.g., the passing of a single train)	60(3)	40(5)	--
Transient Lodging	60(4)	45	--
Hospitals, Nursing Homes	60(3)	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60(3)	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

1 Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.

2 As determined for a typical worst-case hour during periods of use.

3 Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

4 In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

5 The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.

Source: City of Rancho Cordova, 2006

STANDARDS OF SIGNIFICANCE

Noise impacts attributable to the proposed project would be considered significant if:

- Short-term construction noise would result in a substantial increase in ambient noise levels at noise-sensitive land uses during the more noise-sensitive nighttime hours (refer to **Table 3.113**, and General Plan Policy N.2.2, Action N.2.2.1);

- Long-term operational traffic noise would result in a substantial increase in ambient noise levels that would exceed applicable noise standards for transportation noise sources (refer to **Table 3.11.2, Table 3.11.3** and **Table 3.11.4** above);

- Ground vibration levels would exceed Caltrans-recommended thresholds for prevention of human annoyance and structural damage to buildings.

DISCUSSION OF IMPACTS

a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?

SHORT-TERM NOISE IMPACTS

Less than Significant With Mitigation Incorporated. Construction noise would be temporary and would include noise from activities such as site grading, hauling of materials to and from the project site, pouring of concrete, and application of asphalt paving materials. Noise levels associated with road construction activities are typically sporadic, with individual equipment noise levels ranging from approximately 79 dBA to 88 dBA at 50 feet from the source (EPA 1971, FTA 1995). Construction noise levels at nearby residential dwellings would be partially shielded by the existing 6-foot sound wall. However, because exterior ambient noise levels typically decrease during the late evening and nighttime hours as a result of decreased community activities (e.g., vehicle traffic), construction activities being performed during these more noise-sensitive periods of the day could result in increased levels of annoyance and potential sleep disruption to occupants of nearby residential dwellings. As a result, construction-generated noise levels occurring during the late evening and nighttime hours would be considered ***significant***.

Mitigation Measures

MM 3.11-1 Site preparation and construction activities along the International Drive extension portion of the project area (i.e., construction areas closest to sensitive receptors) shall be limited to between the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. on weekends. Noise-generating construction equipment maintenance activities shall be limited to the same hours.

Timing/Implementation: *Prior to and during all construction phases of the project.*

Enforcement/Monitoring: *City of Rancho Cordova Public Works Department.*

MM 3.11-2 Site preparation and construction activities along the Sunrise Boulevard portion of the project area (i.e., construction areas furthest away from sensitive receptors) shall be limited to between the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. on weekends, whenever feasible. Noise-generating construction equipment maintenance activities shall be limited to the same hours, whenever feasible. Construction activities outside of these hours shall be allowed only when nighttime construction is necessary to complete improvements along Sunrise Boulevard while minimizing disruptions to traffic along this critical transportation corridor.

Timing/Implementation: *Prior to and during all construction phases of the project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 3.11-3 Construction equipment shall be equipped with mufflers, in accordance with manufacturers' specifications. Additionally, equipment staging areas shall be located at the furthest distance possible from nearby residential land uses.

Timing/Implementation: *Prior to and during all construction phases of the project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 3.11-4 If recommended improvements to the existing barrier height, as identified in mitigation measure **MM 3.11-5** as necessary to reduce long-term traffic noise levels, are to be completed as part of the project, they shall be substantially completed prior to conducting major onsite construction activities that would involve the frequent and reoccurring use of heavy-duty equipment. "Substantially completed" is defined as of sufficient length and height to block the line-of-sight between ground floor location of adjacent dwellings and on-site heavy duty construction equipment.

Timing/Implementation: *Prior to and during construction phase of the project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

The above mitigation measures are recommended in accordance with the City's General Plan policies. Accordingly, hours of construction in areas closest to sensitive receptors would be limited to the less noise-sensitive daytime hours. Installation of recommended sound barriers prior to implementation of roadway construction activities or retention of existing noise barriers would shield nearby receptors from noise associated with roadway construction. When properly constructed, sound barriers can reduce construction noise by approximately 5-10 dBA. Additional measures, such as the use of mufflers, would reduce individual equipment noise levels by as much as approximately 10 dBA. With mitigation, construction impacts from this project would be considered ***less than significant***.

LONG-TERM NOISE IMPACTS

Less than Significant. Implementation of the proposed project would result in an increase in vehicle traffic noise at nearby land uses, particularly residential dwellings located adjacent to and south of the proposed road alignment. As depicted in **Figure 3.11.1**, the proposed road alignment would extend in an east to west direction along the northern boundary of the existing residential subdivision. The elevations of the residential dwellings located adjacent to the proposed alignment range from approximately 114 feet above ground level at the western-most parcels to approximately 113 feet at the eastern-most parcels. The elevation of the proposed roadway would

gradually increase from approximately 113 feet at the intersection of Kilgore Road to approximately 128 feet at the Folsom South Canal crossing. An existing sound barrier is located along the northern boundary of the existing residential land uses. The existing barrier consists of an approximate 6-foot high masonry block wall. The base of the existing barrier increases from approximately 115 feet at the western-most residential parcels to approximately 120 feet at the eastern-most parcel (Wood Rogers 2006).

To account for changes in noise levels resulting from variations in site and roadway elevations, the Federal Highway Administration's (FHWA) Traffic Noise Model (TNM), version 2.5, was used to calculate predicted average-hourly (in L_{eq}) and average-daily (in CNEL/L_{dn}) traffic noise levels at nearby residential dwellings. Predicted average-hourly noise levels were used for comparison to FHWA/Caltrans noise standards; whereas, predicted average-daily noise levels were used for comparison to the City's noise standards. Additional input data used in the TNM model included vehicle traffic volumes; vehicle distribution percentages, vehicle speeds, ground attenuation factors, and roadway widths. Vehicle type distribution percentages used in the TNM model were adjusted to reflect local vehicle distribution, including percentages of medium and heavy-duty truck traffic, based on vehicle data obtained along local roadways during the site reconnaissance.

The accuracy of the TNM model used for this analysis was verified by comparing measured roadway traffic noise levels with predicted traffic noise levels obtained from the TNM model at four locations along the existing and proposed roadway alignment. In comparison to the measured traffic noise levels, the TNM model over predicted average-hourly traffic noise levels by an average of approximately 1.7 at measured locations. The TNM model over predicted the calculated average-daily traffic noise levels by approximately 2.1 dBA. Adjustment factors of -1.7 and -2.1 dBA were, therefore, applied to predicted average-hourly and average-daily traffic noise levels, respectively, to account for this over prediction.

A total of 14 residential dwellings are located adjacent to and south of the proposed roadway alignment. A commercial office use is located north of the proposed alignment, at the northeast corner of International Drive and Kilgore Road. Predicted traffic noise levels at these nearby receptors were calculated for future cumulative (Year 2030) conditions for both peak-hour and average-daily conditions. For modeling purposes, noise receptors were located at the outdoor activity areas of the existing residential dwellings and at the southern-most building façade of the office building located nearest the proposed roadway alignment. Receptors were located at ground level at a height of approximately 5 feet (1.5 meters) above ground level. Predicted average-hourly and average-daily noise levels, in comparison to Caltrans and the City's noise criteria, are discussed separately as follows:

Predicted Average-Hourly Noise Levels (FHWA/Caltrans Noise Abatement Criteria)

Predicted average-hourly noise levels, in comparison to the FHWA/Caltrans Noise Abatement Criteria are summarized in **Table 3.11.5** and depicted in **Figure 3.11.3**. With implementation of the proposed project and taking into account the existing 6-foot sound barrier, predicted exterior average-hourly noise levels within the exterior activity areas of the nearest residential dwellings would range from approximately 59 to 61 dBA L_{eq}. Based on this exterior noise level and assuming an average exterior-to-interior noise reduction of 25 dB, predicted interior traffic noise levels of these same residences would

range from 25 to 29 dBA L_{eq}. Predicted exterior noise levels at the façade of the existing office building, located along the northern boundary of the proposed alignment, would be 70 dBA L_{eq}. As depicted in **Table 3.11.5**, predicted traffic noise levels at these nearest receptors would not exceed applicable FHWA/Caltrans NAC. Existing and predicted traffic noise levels are also depicted in **Figure 3.11.1**. In addition, implementation of the proposed project would not result in substantial increases (i.e., 12 dBA, or greater) in predicted traffic noise levels at nearby land uses. Based on the modeling conducted, implementation of the proposed project would not warrant additional noise abatement under FHWA and Caltrans requirements.

TABLE 3.11.5
PREDICTED AVERAGE-HOURLY TRAFFIC NOISE LEVELS AT NEARBY RECEPTORS IN COMPARISON TO FHWA/CALTRANS NOISE ABATEMENT CRITERIA

Receptor Number	Receptor Description	Traffic Noise Level (dBA Leq)1 (Exterior/Interior)				Substantial Increase?2	Project Approaches or Exceeds NAC? 3	Impact Type (S, A/E, or None)
		Noise Abatement Criteria (NAC)	Without Project	With Project	Predicted Increase			
1	Residential Dwelling	67/52	54/29	59/34	5	No	No	None
2	Residential Dwelling	67/52	54/29	59/34	5	No	No	None
3	Residential Dwelling	67/52	53/28	59/34	6	No	No	None
4	Residential Dwelling	67/52	52/27	59/34	7	No	No	None
5	Residential Dwelling	67/52	52/27	59/34	8	No	No	None
6	Residential Dwelling	67/52	51/26	60/35	9	No	No	None
7	Residential Dwelling	67/52	51/26	61/36	10	No	No	None
8	Residential Dwelling	67/52	51/26	61/36	10	No	No	None
9	Residential Dwelling	67/52	51/26	61/36	10	No	No	None
10	Residential Dwelling	67/52	51/26	61/36	10	No	No	None
11	Residential Dwelling	67/52	51/26	60/35	9	No	No	None

Receptor Number	Receptor Description	Traffic Noise Level (dBA Leq)1 (Exterior/Interior)				Substantial Increase?2	Project Approaches or Exceeds NAC? 3	Impact Type (S, A/E, or None)
		Noise Abatement Criteria (NAC)	Without Project	With Project	Predicted Increase			
12	Residential Dwelling	67/52	51/26	60/35	9	No	No	None
13	Residential Dwelling	67/52	51/26	60/35	9	No	No	None
14	Residential Dwelling	67/52	50/25	60/35	10	No	No	None
15	Office Building	72	60/35	70/45	10	No	No	None

*1 Noise levels predicted at building setback of office land use and exterior activity areas of residential land uses. Receptor numbers correspond to those depicted in **Figure 3.11.3**.Predicted noise levels take into account the existing 6-foot sound barrier of the existing residential subdivision.*

2. Substantial increase defined as an increase of 12 dBA, or greater (Caltrans 2006).

3. In comparison to federal/state exterior noise abatement criteria (Category A, B, or C). Interior criteria (Category E) are used if exterior areas are physically shielded from the roadway, or if human exterior activity areas are not present. Predicted noise levels within 1.0 dBA of NAC would be considered significant (Caltrans 2006).

For modeling assumptions and results, refer to Appendix A of the Environmental Noise Impact Assessment prepared for this project.

Source: AMBIENT Air Quality & Noise Consulting 2007

T:_CSWork\Rancho Cordova, City of\International Drive Extension_Kilgore to Sunrise-24-0118-002\Figures\Figure 3.11.3 - Predicted Hourly Noise Levels.ai, September 2007

Image Source: Wood Rogers 2006

1 Primarily Affected Residential Receptors

NP Predicted Leq Without Proposed Project (No Project)

WP Predicted Leq With Proposed Project

Existing 6-Foot Sound Barrier

* Predicted traffic noise levels at identified receptors were calculated at ground-level within the outdoor activity areas (rear yard) of adjacent residential land uses. Predicted noise levels have been rounded for illustration purposes.

Source: Ambient Air & Noise Consulting, 2007

City of Rancho Cordova
Planning Department

Figure 3.11.3
Predicted Average-Hourly Noise Levels

Predicted Average-Daily Noise Levels (City of Rancho Cordova Noise Standards)

Predicted average-daily traffic noise levels at the exterior activity area of the nearest residential dwellings are depicted in **Figure 3.11.4** and summarized in **Table 3.11.6**. Based on the modeling conducted, predicted future exterior traffic noise levels at nearby residential dwellings, with the existing 6-foot sound barrier, would range from approximately 60 to 62 dBA L_{dn}/CNEL. As depicted in **Table 3.11.6**, predicted traffic noise levels would exceed the City's "normally acceptable" noise standard of 60 dBA CNEL, but would not be anticipated to exceed the City's "conditionally acceptable" noise standard of 65 dBA CNEL. The City's noise standards require implementation of "practical" noise mitigation for dwellings exposed to predicted traffic noise levels in excess of 60 dBA CNEL. Traffic noise levels of up to 65 dBA CNEL would be considered conditionally acceptable, provided "practical" noise-abatement measures are implemented. As previously noted in **Table 3.11.5** predicted interior noise levels at the office building would be approximately 45 dBA CNEL, or less, and would not exceed the City's applicable noise standard for office buildings.

TABLE 3.11.6
PREDICTED AVERAGE-DAILY TRAFFIC NOISE LEVELS AT NEARBY RECEPTORS IN COMPARISON TO CITY OF RANCHO CORDOVA NOISE STANDARDS

Noise-Sensitive Receptors1		Predicted Noise Levels (dBA CNEL)2 (Exterior/Interior)	Exceeds City's Noise Standards? (dBA CNEL) 3	
Number	Description		Normally Acceptable	Conditionally Acceptable
1	Single Family Residence	61/36	Yes	No
2	Single Family Residence	61/36	Yes	No
3	Single Family Residence	61/36	Yes	No
4	Single Family Residence	61/36	Yes	No
5	Single Family Residence	61/36	Yes	No
6	Single Family Residence	62/37	Yes	No
7	Single Family Residence	62/37	Yes	No
8	Single Family Residence	62/37	Yes	No
9	Single Family Residence	62/37	Yes	No
10	Single Family Residence	62/37	Yes	No
11	Single Family Residence	62/37	Yes	No
12	Single Family Residence	62/37	Yes	No
13	Single Family Residence	62/37	Yes	No
14	Single Family Residence	62/37	Yes	No

1 Noise-sensitive receptors correspond to those depicted in Figures 3.11.3 through 3.11.5 of this report.

2 Traffic noise levels were calculated using the FHWA Traffic Noise Model (Refer to Appendix A). Exterior traffic noise levels are measured at the nearest property line. Predicted interior noise levels are based on maximum predicted exterior noise levels and assume an average exterior-to-interior noise reduction of 25 dBA.

3 In comparison to the City of Rancho Cordova's "normally acceptable" exterior noise standard of 60 dBA CNEL and "conditionally acceptable" exterior noise standard of 65 dBA CNEL. Predicted noise levels would not exceed the City's interior noise standard of 45 dBA CNEL.

Source: Ambient Air and Noise Consulting, 2006

As addressed by General Plan Action 2.2.1, where existing noise conditions at a project area are below 60dBA Ldn, a 5dBA Ldn increase from roadway improvements is allowable, and where existing noise conditions are between 60 and 65 dBA Ldn, an increase of 3dBA Ldn is allowable. Given that existing noise conditions in the project area are between 59.2 and 60.6 dBA Ldn, as shown in **Figure 3.11.1**, and the predicted noise levels after project implementation are anticipated to be between 60 and 62 dBA Ldn, as shown in **Figure 3.11.4** and summarized in **Table 3.11.6**, the project would result in noise increases of up to 2.8 dBA Ldn, which are within the thresholds allowed by General Plan Action 2.2.1.

It is important to reiterate that, per FHWA/Caltrans noise abatement criteria, noise abatement would not be required for this project. Additionally, the project would also result in noise increases that are within allowable thresholds pursuant to the City of Rancho Cordova General plan policies, however, the City requested that Ambient Air Quality and Noise Consulting perform additional analysis of possible noise-abatement measures to evaluate the effectiveness of reducing predicted traffic noise levels at the nearest residential dwellings. The noise abatement measures considered for this analysis included two scenarios for increasing the overall height of the existing 6-foot noise barrier to increased heights of 8 and 10 feet, respectively, as well as the use of rubberized asphalt. The effectiveness of these noise-abatement measures are discussed separately, as follows:

Increased Barrier Height

Predicted future average-daily traffic noise levels at the nearest property line of the nearest residences, at varying barrier heights of 6, 8, and 10 feet, are summarized in **Table 3.11.7** and depicted in **Figure 3.11.4**. The barrier analysis analyzed increases in the height of the existing sound barrier located along the property line of adjacent residential land uses using the FHWA TNM model. Use of the TNM model allows for the simultaneous evaluation of multiple segments of a sound barrier to optimize calculated noise reductions at multiple receptor locations. As depicted, an increase in barrier height to 8 feet would reduce predicted traffic noise levels by approximately 1-2 dBA. An increase in barrier height to 10 feet would reduce traffic noise levels at the property line of the nearest residential dwellings by approximately 2-3 dBA. With an increase in barrier height to 10 feet, predicted average-daily traffic noise levels at the nearest property line of adjacent residential dwellings would be reduced to 60 dBA CNEL, or less.

T:_CS\Work\Rancho Cordova, City ofInternational Drive Extension_Kilgore to Sunrise-24-0118-002\Figures\Figure 3.11.4 - Predicted Daily Noise Levels.ai, September 2007

Image Source: Wood Rogers 2006

1 Primarily Affected Residential Receptors

6-FT	Predicted CNEL With Existing 6-Foot Sound Barrier
8-FT	Predicted CNEL With 8-Foot Sound Barrier
10-FT	Predicted CNEL With 10-Foot Sound Barrier

Existing 6-Foot Sound Barrier

Depicts Portion of Existing Sound Barrier Recommended for Increased Barrier Height (with Standard Asphalt)

* Predicted traffic noise levels at identified receptors were calculated at ground-level within the outdoor activity areas (rear yard) of adjacent residential land uses. Predicted noise levels have been rounded for illustration purposes.

Source: Ambient Air & Noise Consulting, 2007

City of Rancho Cordova
Planning Department

Figure 3.11.4
Predicted Average-Daily Noise Levels
Barrier Height Alternatives

TABLE 3.11.7
PREDICTED TRAFFIC NOISE LEVELS – BARRIER HEIGHT ALTERNATIVES

Noise-Sensitive Receptors[1]		Comparison of Predicted Noise Levels (dBA CNEL)2				
Number	Description	Existing 6-Foot Sound Barrier	8-Foot Sound Barrier	Predicted Reduction	10-Foot Sound Barrier	Predicted Reduction
1	Single Family Residence	61	59	-2	58	-3
2	Single Family Residence	61	59	-2	58	-3
3	Single Family Residence	61	59	-2	58	-3
4	Single Family Residence	61	59	-2	58	-3
5	Single Family Residence	61	60	-1	58	-3
6	Single Family Residence	62	60	-2	59	-3
7	Single Family Residence	62	61	-1	60	-2
8	Single Family Residence	62	61	-1	60	-2
9	Single Family Residence	62	61	-1	60	-2
10	Single Family Residence	62	61	-1	60	-2
11	Single Family Residence	62	61	-1	60	-2
12	Single Family Residence	62	61	-1	60	-2
13	Single Family Residence	62	61	-1	60	-2
14	Single Family Residence	62	61	-1	60	-2

1 Noise-sensitive receptors correspond to those depicted in Figure 3.11.4 of this report.

2 Traffic noise levels were calculated using the FHWA Traffic Noise Model (Refer to Appendix A). Based on predicted traffic noise levels at the nearest property line of adjacent residential dwellings.

Source: Ambient Air and Noise Consulting, 2007

Rubberized Asphalt

Use of noise-reducing pavement (commonly referred to as rubberized asphalt) to reduce traffic noise has received increased attention over the past several years. Within the United States, various studies have been completed that have demonstrated substantial reduction in initial traffic noise levels. However, research pertaining to the long-term viability of the use of rubberized asphalt for reducing traffic noise levels is currently ongoing. Based on the studies conducted to date, various inconsistencies between the noise studies have been noted pertaining to the overall noise benefits associated with the use of rubberized asphalt pavement. To some extent, this is due to variations in local traffic and meteorological conditions. The evaluation of the noise-reduction potential of rubberized asphalt is currently ongoing. For these reasons, neither the FHWA nor Caltrans have approved the use of rubberized asphalt as a long-term traffic noise-reduction measure (Caltrans 2005). A copy of Caltrans' most current advisory related to the use of rubberized asphalt for noise reduction mitigation is included in *Appendix B* of the Environmental Noise Impact Assessment prepared for this project.

Within Sacramento County, a number of studies have been conducted over the past few years to evaluate potential decreases in traffic noise associated with the use of rubberized asphalt. The first of these noise studies was commissioned by the Sacramento County Department of Environmental Review and Assessment (DERA) in 1993. The most recent study, also commissioned by DERA, was completed in 1999. This most recent study concluded that the use of rubberized asphalt resulted in a net decrease in traffic noise levels of approximately 4 dB over that provided by conventional asphalt. The report also notes that the effectiveness of rubberized asphalt in reducing traffic noise levels would be dependent on local traffic and meteorological conditions (DERA 1999). A copy of this most recent noise study is included in *Appendix C* of the Environmental Noise Impact Assessment prepared for this project.

At the request of the City of Rancho Cordova, this report included an analysis of traffic noise reduction potential associated with the application of asphalt paving to the proposed extension of International Drive. For modeling purposes, predicted traffic noise levels associated with vehicular traffic traveling along the proposed roadway segment was reduced by 4 dBA, based on the average noise reduction noted in the most recent study completed in the County (DERA 1999). Predicted traffic noise levels at the nearest residences, with and without the application of asphalt paving, were calculated assuming an existing sound barrier height of 6 feet. Predicted noise levels are summarized in **Table 3.11.8** and depicted in **Figure 3.11.5**. As shown, the use of rubberized asphalt would reduce predicted traffic noise levels at nearby residential dwellings to approximately 58 to 59 dBA CNEL, which would be below the City's normally acceptable noise standard of 60 dBA CNEL. When taking into account noise influences from other area roadway segments, the use of rubberized asphalt along the proposed roadway extension would result in an overall traffic noise reduction of approximately 3 dBA at the nearest residential receptors. However, it is important to reiterate that predicted noise reductions associated with rubberized asphalt have been found to vary and, therefore, may be higher or lower than those presented in this report. In addition, although rubberized asphalt is recognized in reducing near-term traffic noise levels, the long-term benefits associated with the use of rubberized asphalt pavement are still being evaluated. As a result, predicted reductions in traffic noise levels associated with the use of rubberized asphalt should be interpreted with caution.

T:_CS\Work\Rancho Cordova, City of\International Drive Extension_Kilgore to Sunrise-24-0118-002\Figures\Figure 3.11.5 - Predicted Daily Noise Levels-Asphalt.ai, September 2007

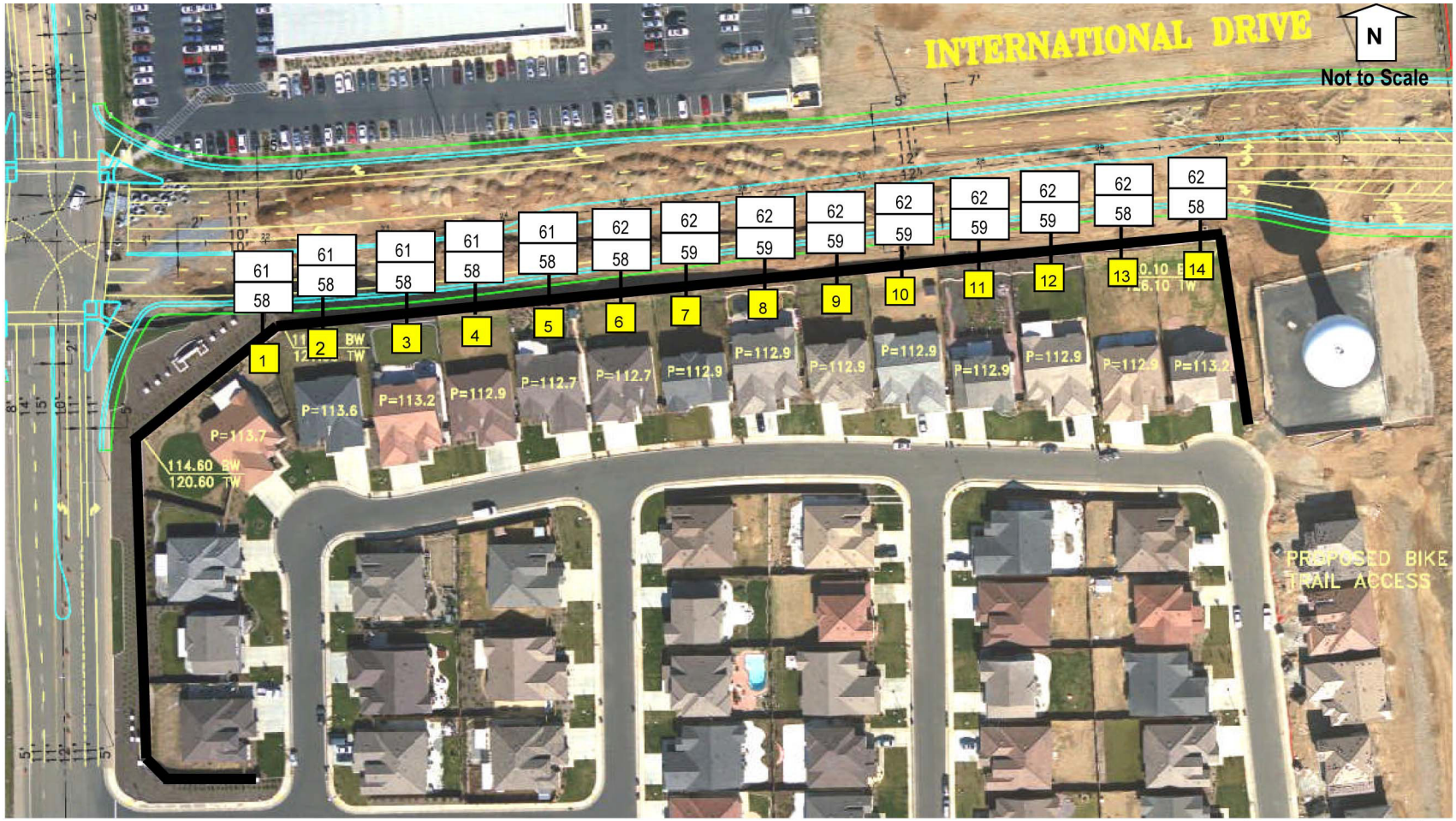


Image Source: Wood Rogers 2006

1 Primarily Affected Residential Receptors

STD With Standard Asphalt Applied to Roadway Extension

RUB With Rubberized Asphalt Applied to Roadway Extension

Existing 6-Foot Sound Barrier

* Predicted traffic noise levels at identified receptors were calculated at ground-level within the outdoor activity areas of adjacent residential uses. Use of rubberized asphalt for traffic noise mitigation is not currently recognized by the FHWA or Caltrans. Predicted noise levels assume an average noise reduction of 4 dBA for rubberized asphalt . Long-term noise-reduction potential of rubberized asphalt is currently under study. Predicted noise levels have been rounded for illustration purposes.

Source: Ambient Air & Noise Consulting, 2007

City of Rancho Cordova
Planning Department

Figure 3.11.5
Predicted Average-Daily Noise Levels
With/Without Rubber Asphalt

TABLE 3.11.8
PREDICTED TRAFFIC NOISE LEVELS – EXISTING 6-FOOT SOUND BARRIER WITH/WITHOUT RUBBERIZED ASPHALT

Noise-Sensitive Receptors[1]		Predicted Noise Levels (dBA CNEL)[2]		
Number	Description	Without Rubberized Asphalt	With Rubberized Asphalt	Calculated Noise Reduction[3]
1	Single Family Residence	61	58	2
2	Single Family Residence	61	58	2
3	Single Family Residence	61	58	3
4	Single Family Residence	61	58	3
5	Single Family Residence	61	58	3
6	Single Family Residence	62	58	3
7	Single Family Residence	62	59	3
8	Single Family Residence	62	59	3
9	Single Family Residence	62	59	3
10	Single Family Residence	62	59	3
11	Single Family Residence	62	59	3
12	Single Family Residence	62	59	3
13	Single Family Residence	62	58	3
14	Single Family Residence	62	58	3

1 Noise-sensitive receptors correspond to those depicted in Exhibit 4 of this report.

2 Traffic noise levels were calculated using the FHWA Traffic Noise Model (Refer to Appendix A). Represents the maximum predicted traffic noise levels at ground level outdoor activity areas.

3 To prevent overstating of noise-reduction benefits, the calculated noise reduction was calculated prior to rounding of predicted noise levels and, therefore, may vary slightly from the calculated reduction obtained by subtraction of the predicted noise levels depicted in this table.

Source: Ambient Air and Noise Consulting, 2007

Mitigation Measures

Predicted traffic noise levels associated with the proposed extension of International Drive would not exceed FHWA/Caltrans noise abatement criteria. Predicted exterior noise increases resulting from operation of the project would not exceed the City's allowable increase of 3 dBA Ldn. Additionally, predicted exterior noise levels at nearby residential land uses would not exceed the City's "conditionally acceptable" noise standard of 65 dBA CNEL, but would exceed the City's "normally acceptable" exterior noise standard of 60 dBA CNEL. To achieve the City's "normally acceptable" exterior noise standard of 60 dBA L_{dn}/CNEL the following measure is recommended:

MM 3.11-5 The existing sound barrier should be increased to a minimum height of 8 feet along the adjoining parcels identified as receptors 1 through 5 and to a minimum height of 10 feet for receptors 6 through 14. The height of the recommended sound barrier improvements are measured from the base elevation of the existing sound barrier. To diminish the overall aesthetic impact of the barrier, increases in height

should occur gradually, preferably in increments of approximately 1-foot. In addition, it is recommended that adjoining segments of the existing sound barrier (not recommended for height improvement) be improved to provide for a gradual step-down in height. Recommended barrier heights are depicted in **Figure 3.11.6**.

Timing/Implementation: *Prior to project completion.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

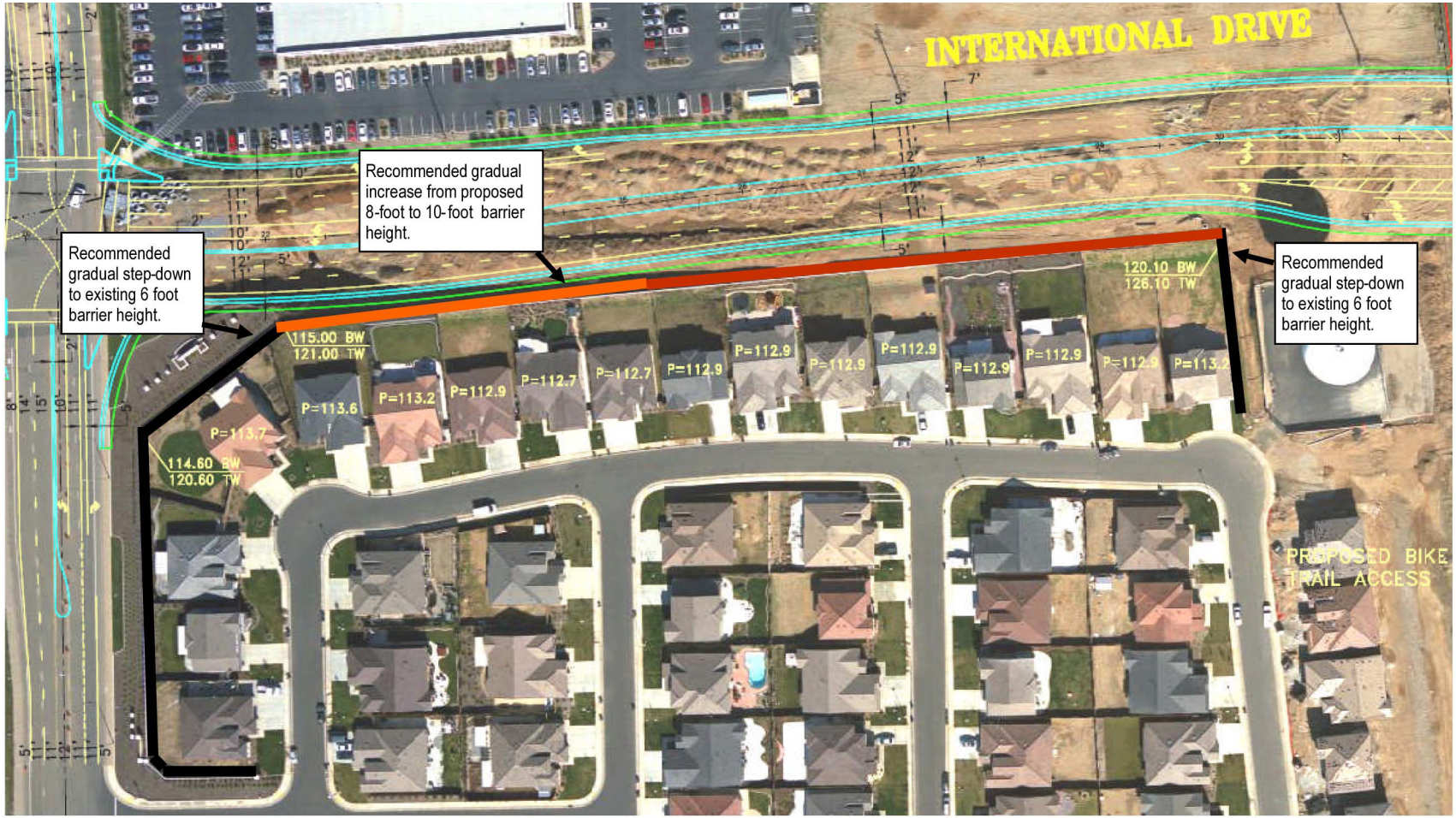
Although predicted future traffic noise levels are within acceptable thresholds set forth in the City of Rancho Cordova General plan policies, implementation of the above recommended mitigation measure would reduce predicted future traffic noise levels at nearby residential land uses to within normally acceptable levels. With or without mitigation, this impact would be considered ***less than significant***.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant. Ground vibration spreads through the ground and diminishes in strength with distance. The effects of ground vibration can vary from no perceptible effects at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely result in structural damage.

There are no FHWA or state standards for vibrations. The traditional view has been that highway traffic and construction vibrations pose no threat to buildings and structures. A considerable amount of research has been done to correlate vibrations from single events such as dynamite blasts with architectural and structural damage. The U.S. Bureau of Mines has set a "safe blasting limit" of 50 mm/s (2 in/sec). Below this level there is virtually no risk of building damage (Caltrans 2002).

“Safe” levels for continuous vibrations from sources such as traffic are not as well defined. The Transport and Road Research Laboratory in England has researched continuous vibrations to some extent and developed a summary of vibration levels and reactions of people and the effects on buildings (**Table 3.11.9**). These are the criteria used by Caltrans to evaluate the severity of vibration problems. Traffic, train, and most construction vibrations (with the exception of pile driving, blasting, and some other types of construction/demolition) are considered continuous. As shown in **Table 3.11.9**, the "architectural damage risk level" for continuous vibrations is approximately 0.2 in/sec ppv. This same continuous vibration level corresponds to the level at which vibrations tend to become annoying to people in buildings. Structural damage can occur at levels of approximately 0.5 in/sec ppm, or greater (Caltrans 2002).



Existing 6-Foot Sound Barrier

Recommended 8-Foot (Minimum Height) Sound Barrier

Recommended 10-Foot (Minimum Height) Sound Barrier

Image Source: Wood Rogers 2006

N

Not to Scale

Source: Ambient Air & Noise Consulting, 2007

T:_CS\Work\Rancho Cordova, City of\International Drive Extension_Kilgore to Sunrise-24-0118-002\Figures\Figure 3.11.6 - Sound Barrier Improvements.ai, September 2007

City of Rancho Cordova
Planning Department

Figure 3.11.6
Recommended Sound Barrier Improvements

TABLE 3.11.9
REACTION OF PEOPLE AND DAMAGE TO BUILDINGS AT VARIOUS CONSTRUCTION VIBRATION LEVELS

Vibration Level (in/sec ppv)	Human Reaction	Effect on Buildings
0.006 – 0.019	Threshold of perception; possibility of intrusion	Vibration unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural damage" to normal buildings
0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridge and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwellings – houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage.
0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges.	Vibrations at the greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage.

The vibration levels are based on peak particle velocity in the vertical direction. Where human reactions are concerned, the value is at the point at which the person is situated. For buildings, the value refers to the ground motion. No allowance is included for the amplifying effect, if any, of structural components.

Source: Caltrans 2002

Long-term operational activities associated with the proposed project would not involve the use of any equipment or processes that would result in potentially significant levels of ground vibration. Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Construction activities associated with the proposed improvements would likely require the use of various tractors, trucks, and jackhammers. The use of pile driving equipment to construct the new bridge over the Folsom South Canal would not be used. Instead, the installation of bridge support piles would be completed by drilling, which results in substantially less groundborne vibration than pile driving. Groundborne vibration levels associated with typical construction equipment are summarized in **Table 3.11.9**.

Based on the vibration levels presented in **Table 3.11.9**, ground vibration generated by construction equipment would be less than 0.09 inches per second ppv at 25 feet. Predicted vibration levels at the nearest structures would not exceed the commonly applied threshold of 0.5 in/sec ppv for structural damage or the recommended human annoyance threshold of 0.2 in/sec ppv. No historic or fragile buildings were identified in the project area. Short-term groundborne vibration impacts would be considered ***less than significant***.

TABLE 3.11.10
REPRESENTATIVE VIBRATION SOURCE LEVELS
FOR CONSTRUCTION EQUIPMENT

Equipment	Peak Particle Velocity at 25 Feet (in/sec ppv)
Large Tractors	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Tractors	0.003
Caisson Drilling	0.089

Source: FTA 2006

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant with Mitigation Incorporated. Predicted increases in traffic noise levels attributable to the proposed project would exceed the City's "normally acceptable" noise standard of 60 dBA L_{dn}/CNEL at nearby residential land uses. Refer to Discussion a) above for additional discussion.

As identified in Discussion a) above, the project would result in ***significant*** increases in ambient noise levels in the project vicinity above levels existing without the project***.*** With implementation of mitigation measures **MM 3.11-1** through **MM 3.11-4**, this impact would be reduced to ***less than significant***.

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant with Mitigation Incorporated. Implementation of the proposed project may result in potentially significant increases in ambient noise levels at nearby existing residential land uses associated with short-term construction activities. Implementation of **MM 3.11-1** through **MM 3.11-4** would reduce this impact to ***less than significant***.

e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The nearest airport/airstrip is the Mather Airport in Mather, CA approximately three (3) miles southwest of the project site; therefore, there would be no impact associated with public airports.

f) For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. Refer to response e), above.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.12 POPULATION AND HOUSING	Would the project:			
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The proposed project area is open space with the Folsom South Canal located parallel to Sunrise Boulevard at the eastern portion of the project site. Residential developments lay adjacent to the project area to the south, and further away from the project area to the east. North of the roadway extension is open space and Industrial/Office parks as well as to the west of the project site.

DISCUSSION OF IMPACTS

a) Would the project induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

No Impact. The proposed project is a roadway extension project that is consistent with the Circulation Element of the Rancho Cordova Draft General Plan, which seeks to create a community with continuous circulation and to improve traffic flow throughout the City of Rancho Cordova. The extension of International Drive would not induce growth above that which is expected from planned and approved residential development in the area; therefore, the project is expected to have no impact on growth inducement in the area.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. No homes would be taken as part of the proposed project; therefore there would be no need to construct replacement housing.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As discussed in b) above, the project would not involve the taking of any housing, and would, therefore, not displace any people or necessitate the construction of replacement housing.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.13 PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The project area is serviced by the Rancho Cordova Police Department and is contracted by the Sacramento County Sheriff's Department for police protection. The Sacramento Metropolitan Fire District (SMFD) provides fire protection, prevention, and emergency medical services. Educational services are provided through the Folsom Cordova Unified School District. The City provides maintenance of public facilities, including the project area roadways.

DISCUSSION OF IMPACTS

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

a) Fire protection?

No Impact. The proposed project would not include a residential or commercial component that would increase human presence in the area, nor would it result in the need for additional facilities to service the project area; therefore, there would be no need for additional governmental facilities to maintain acceptable service ratios, response times, and other performance objectives for fire protection.

b) Police protection?

No Impact. Refer to response a), above. There would be no need for additional governmental facilities to maintain acceptable service ratios, response times, and other performance objectives for police protection.

c) Schools?

No Impact. Refer to response a), above. The proposed project would not result in an increased demand for schools. As such, there would be no need for additional governmental facilities to maintain acceptable service ratios for schools.

d) Parks?

No Impact. Refer to response a), above. The proposed project would not result in an increased demand for parks. As such, there would be no need for additional governmental facilities to maintain acceptable service ratios for parks.

e) Other public facilities?

No Impact. Refer to response a), above. The proposed project would not include a residential or commercial component that would increase human presence in the area; therefore additional public services would not be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.14 RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The City of Rancho Cordova Draft General Plan contains an Open Space, Parks, and Trails Element that identifies the need to maintain existing open space and natural recreational areas, as well as to create additional areas for the enjoyment of residents and the protection of the environment. The goals, policies, and actions provided are intended to achieve the City's vision of open spaces that are accessible to all members of the community, however there are no known plans to develop new recreational facilities within the project area.

DISCUSSION OF IMPACTS

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project is a roadway extension project that would not create any new demands for any type of recreational facilities; therefore, the project would have no impact on increased use of existing local recreational facilities.

b) Does the project include recreational facilities, or require the construction or expansion of existing facilities, which might have an adverse physical effect on the environment?

No Impact. The proposed project would not require the construction or expansion of recreational facilities; therefore no impacts to the environment would occur as a result of construction or expansion of these.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.15 TRANSPORTATION/TRAFFIC	Would the project:			
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The project consists of extending International Drive across the Folsom South Canal terminating at Sunrise Boulevard. International Drive currently terminates at Kilgore Road. Employees of the nearby office parks and local residences are the principal users of this segment of International Drive. Vehicles traveling on International Drive need to take White Rock Road to access Sunrise Boulevard. The extension of International Drive to Sunrise Boulevard would help to relieve traffic congestion and improve traffic circulation.

DISCUSSION OF IMPACTS

a) Would the project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?

Less than Significant Impact. The number of through lanes across International Drive would increase from four to six lanes; however the proposed project is not expected to cause or result in a substantial increase in existing traffic trips on area roadways, since no trip-generating land uses are associated with the project (i.e., residential developments, commercial centers, etc.).

Short-term construction activities may temporarily disrupt traffic through the area. The contractor would complete a Traffic Control Plan and submit it to the Public Works Department for approval. Because any potential traffic disruption resulting from the project would be construction-related and, thus, temporary in nature, the overall impacts are considered less than significant.

b) Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

No Impact. Overall, the project would cause no impact to the LOS established by the City of Rancho Cordova or the County of Sacramento because the project contains no growth inducing land uses/businesses/residential development. Although the project would modify the number of through lanes from four to six across the length of the extended roadway and new bridge, any changes in LOS are anticipated to only improve those of the surrounding areas.

c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The proposed project would not result in a change in air traffic patterns or increase traffic levels that would result in a substantial safety risk. The project does not propose any structures that would impede a height limitation in close proximity to an airport; therefore, no impacts on air traffic patterns would occur as a result of this project.

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The project proposes to extend International Drive across the Folsom South Canal where it will terminate at Sunrise Boulevard. While the road would be extended to Sunrise Boulevard with a bridge, it would not substantially differ from the existing road. No design feature of this project would present additional hazards or incompatible uses such as sharp curves, dangerous intersections, or turning radius of non-standard design.

e) Would the project result in inadequate emergency access?

Less than Significant Impact. The project would extend International Drive across the Folsom South Canal where it will terminate at Sunrise Boulevard, and would result in

increased emergency access points of entry after project construction. During construction, it is anticipated that portions of the lanes on International Drive will be closed. As a result the project may potentially slow emergency access through the project area during construction. However, as part of project development, the construction contractor would develop plans for alternative emergency access, and submit these alternatives to emergency service providers for approval prior to the start of construction. Additionally, the contractor would be required to submit a Traffic Management Plan (TMP) that would include an emergency access plan to accommodate emergency traffic during the construction period, and this plan would be provided to emergency agencies (i.e., fire and police departments) prior to the start of construction. Therefore, the proposed project would have a less than significant impact on emergency access.

f) Would the project result in inadequate parking capacity?

Less than Significant Impact. The proposed project would not cause the loss of on-street parking spaces and no land uses are proposed that would generate a demand for parking. Intersection alignment at the intersection of International and Kilgore may require permanent loss of some parking spaces from the parking area in the northeast corner of the intersection. Approximately 8 of approximately 400+ parking spaces would potentially be lost permanently, however this approximately 2% loss is minimal; therefore, the proposed project would have a less than significant impact on parking capacity.

g) Would the project conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Less than Significant With Mitigation Incorporated. The proposed project was developed based on the City of Rancho Cordova Draft General Plan and is consistent with its goals and objectives. The project would provide for alternative transportation through the preservation of a contiguous bicycle path along the Folsom South Canal (i.e., bicyclists will be able to ride under the new bridge along the canal without having to cross at an at-grade crossing such as the one located nearby at White Rock Road), and through bicycle lanes provided on the new International Drive roadway and bridge itself. Additionally, access from International Drive to the Folsom South Canal below would also be provided by the project.

During construction of the new bridge over Folsom South Canal, it will be necessary to temporarily close the bicycle path at that location to allow for activities necessary to construct the new bridge. These activities would include the excavation of a small portion of the bicycle trail to allow clearance between the trail and the new bridge, installation of a retaining wall, and re-paving of the bicycle trail in the area. Due to the lack of access points south of the project area, closure of the bicycle trail at the International Drive location would effectively eliminate access to the trail for bicyclists traveling south beginning at the construction site and ending at Jackson Highway (SR 16) located approximately 5.5 miles south of the construction area. For bicyclists traveling north, they would be able to access the trail at Jackson Highway and travel up to the construction site, however during construction, through access would be blocked, and bicyclists would have to turn around and return to Jackson Highway to exit the trail. This blockage of through access would be of particular concern to bicyclists who utilize the trail for commuting purposes and require through-access along this area of the trail.

Alternative routes for bicyclists to use during construction are limited, and are confined primarily to the bicycle lanes and roadway shoulders available on Sunrise Boulevard. Bicyclists traveling south may access Sunrise Boulevard at White Rock Road, immediately north of the International Drive bridge construction area, and then utilize the striped bicycle lane or roadway shoulder along Sunrise Boulevard to Jackson Highway, where access back onto the canal bicycle trail is available.

While this area of the Folsom South Canal bicycle trail is not heavily used, it is relied upon by a small number of community members for both recreational and bicycle commuting purposes. A lengthy closure of the bicycle trail could result in significant impacts through long-term disruption of access to this portion of the trail. The following mitigation measures shall be implemented to reduce these impacts:

MM 3.15-1 The construction contractor shall minimize the duration of the closure of the Folsom South Canal bicycle trail to the shortest period necessary to complete construction activities. The bicycle trail shall only be closed to bicycle and pedestrian traffic when construction activities are such that they either physically disrupt movement along the trial (i.e., during trail excavation), or construction activities could present a safety hazard to individuals passing through the construction area. The trail shall remain open during regular trail hours, unless construction activities are occurring that require closure of the trail for either physical or public safety reasons.

Timing/Implementation: During project construction.

Enforcement/Monitoring: City of Rancho Cordova Planning Department.

MM 2.15.2 Signage shall be placed at the entrances to the trail at White Rock Road and Jackson Highway notifying users of the Folsom South Canal bicycle trail of the closure. The signage shall be of sufficient size, coloring, and placement that it will be easily visible to bicyclists who may pass by it at higher speeds. When feasible, this signage will also advise users of the trail of alternative routes they may use to move between White Rock Road and Jackson Highway in-lieu of through-access at the International Drive Extension construction site. When feasible, the signage shall be installed at least five days prior to the closure to notify users in advance of the closing. The signage shall be maintained throughout the duration of any trail closure. The City of Rancho Cordova shall also notify local bicycling groups and associations prior to closure of the bicycle trail, and notify them again of its re-opening, so that the groups may help disseminate the information to their members. Notification to bicycling groups and associations shall be made at least five days in advance of any trail closures, whenever feasible.

Timing/Implementation: During project construction.

Enforcement/Monitoring: City of Rancho Cordova Planning Department.

After implementation of the above mitigation measures, and because the interruption would be temporary and would affect a relatively small number of users, the project's impacts to alternative transportation access via the Folsom South Canal bicycle trail would be considered less ***than significant after mitigation incorporated***.

It should be noted that this temporary closure of the bicycle trail triggers the need for Caltrans, which assumed all of FHWA's responsibilities under the National Environmental Policy Act (NEPA), to review the project's effects to the bicycle trail pursuant to Section 4(f) of the Department of Transportation Act of 1966. Section 4(f) of the Act prevents Caltrans from approving projects that require the use of a publicly owned, recreation area unless there is no feasible or prudent alternative to the use of that land. The Folsom South Canal bicycle trail, which is owned by the federal Bureau of Reclamation, would be considered a Section 4(f) resource and temporary closure would be considered a transportation use. This requires a Section 4(f) Evaluation to analyze the impacts of the transportation use. In this case, however, the impacts to the bicycle trail will not be adverse. This includes consideration of the avoidance, minimization, mitigation, or enhancement measures. The recreational features and attributes of the bicycle trail will be fully restored once the project is complete. Therefore, it is Caltrans's intent to make a determination that the temporary impacts will be *de minimis* to the bicycle trail. After the public has been afforded an opportunity to review and comment on the effects of the project to the features and attributes of the Section 4(f) resource, Caltrans will request concurrence from the Bureau of Reclamation that there are no adverse effects to the bicycle trail. This *de minimis* determination will satisfy the Section 4(f) requirements for this project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.16 UTILITIES AND SERVICE SYSTEMS	Would the project:			
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The Sacramento Municipal Utility District (SMUD) is the primary provider of electric service in the Planning Area and works closely with the City to ensure a reliable power supply for all residents. Pacific Gas and Electric Company (PG&E) provides natural gas to all customers in the Planning Area. PG&E also owns and maintains some of the City's electrical facilities.

Several companies in the Planning Area, including Comcast and SBC Communications, provide telephone and cable services. Solid waste services in the project area are provided by Central Valley Waste Services. The County Sanitation District 1 provides sanitary sewer service to the entire Planning Area.

DISCUSSION OF IMPACTS

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The proposed project would not produce additional wastewater; therefore, there would be no impact**.**

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. Refer to response a), above. The project would have no impact on water or wastewater treatment facilities.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. The extension of International Drive would require construction of new storm water drainage facilities adjacent to the proposed roadway to receive run-off from the new pavement. The environmental effects of these new storm water drainage facilities are considered in this analysis for the construction of the new roadway. The new roadside drainage facilities would convey water to existing roadway drainage facilities, which are adequately sized to convey the minor amounts of additional storm water run-off that would be generated by the project. Construction of additional storm water drainage facilities or expansion of existing facilities to convey water from the project site to downstream outlets would not be required to accommodate the minor amounts of additional stormwater generated by the project.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less than Significant Impact. The proposed project may temporarily require minimal amounts of water to supply irrigation to replacement vegetation that would be installed after project construction, which existing water supplies are capable of supplying. The amounts required for vegetation establishment irrigation would not be substantial and would not require the procurement of additional entitlements or resources. Because the project does not have any components that would regularly demand substantial amounts of water, it is not anticipated that the project would result in insufficient water supplies in the area.

e) Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?

No Impact. The proposed project would not produce additional wastewater; therefore, there would be no impact.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less than Significant Impact. Solid waste generated by the proposed roadway extension project would be limited to soils and construction debris, including asphalt and concrete, during project construction. Solid waste disposal of demolition and construction materials, including the disposal of any hazardous wastes that may be encountered, would occur in accordance with federal, state and local regulations. Disposal would occur at permitted landfills. Therefore, the proposed project would not generate the need for new solid waste facilities and the project's impacts would be considered less than significant.

g) Would the project comply with federal, state and local statutes and regulations related to solid waste?

No Impact. The proposed project would conform to all applicable state and federal solid waste regulations; therefore, there would be no impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.17 MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

DISCUSSION OF IMPACTS

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?

Less than Significant with Mitigation Incorporated. The proposed project would result in removal of trees that have the potential to serve as nesting habitat to special-status bird species. Additionally, the project would result in the removal of habitat that could be used as foraging habitat by special-status bird species. Mitigation measures **MM 3.4.1** through **MM 3.4.1c** have been identified to ensure **less than significant** impacts to Swainson's hawk and Migratory birds that may utilize the area for nesting or

foraging. Mitigation measures **MM 3.7.1** and **MM 3.8.1** have been identified to ensure **less than significant** impacts to water quality in the project area.

b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Less than Significant with Mitigation Incorporated. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. As stated in the question above, the assessment of the significance of the cumulative effects of a project must be conducted in connection with the effects of past projects, other current projects, and probable future projects.

Overall, the project would make no significant contribution to cumulatively significant impacts associated with existing or proposed projects in the City of Rancho Cordova. The project would widen an existing roadway and provide access across the Folsom South Canal to provide connectivity between office and residential uses on the west to Sunrise Blvd in the east.

Mitigation measures identified throughout this Initial Study would serve to fully mitigate any potential impacts that could result from the project, and the project would not make a significant contribution to cumulatively significant impacts from development in the area.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant with Mitigation Incorporated. Sacramento County has non-attainment status for ozone and PM_{10}. The proposed project would utilize construction equipment for the roadway and bridge construction activities. Construction activities such as the use of heavy equipment that generate dust, exhaust, and tire wear emissions and from paints and coatings may increase the air pollutants in the area temporarily, however these impacts would be short term and limited in nature, and would be less than significant with implementation of mitigation measures **MM 3.3-1** through **MM 3.3-4**.

Noise generated during construction could be significant. Mitigation measures **MM 3.11.1** through **MM 3.11-2** have been identified to reduce these impacts to less than significant levels during project construction. Additionally, mitigation measures **MM 3.11-3** and **MM 3.11-4** would reduce operational noise levels after completion of the project.

Lastly, construction activities could pose threats to area residents and construction contractors by the use of fuels and chemicals associated with fueling construction equipment and other construction activities. See Section 3.7 for discussion of potential hazards. Mitigation measure **MM 3.7.1** would reduce the impacts related to hazardous materials to **less than significant**.