

**EL DORADO COUNTY**  
**Department of Transportation**

**INITIAL STUDY OF ENVIRONMENTAL SIGNIFICANCE**

<b>PROJECT NAME:</b>	<b>Silva Valley Parkway Interchange Project</b>	<b>FILE NUMBER:</b>
<b>SITE ADDRESS:</b>		APN: 122-720-09-100
<b>APPLICANT:</b>	Department of Transportation El Dorado County 2850 Fairlane Court Placerville, CA 95667	<b>PHONE:</b>  530-621-5900
<b>PROPERTY OWNER:</b>	El Dorado County	Prev. Cert. EIRs: 1991 Final Environmental Impact Report for Silva Valley Parkway Interchange with U.S. Highway 50  <b>SCH #: 88050215</b>
<p><b>PROJECT DESCRIPTION:</b> The County of El Dorado is proposing to construct a new Silva Valley Parkway interchange on U.S. 50 between the El Dorado Hills/Latrobe Road interchange and the Bass Lake Road interchange, near the existing Silva Valley Parkway undercrossing. The purpose of the project is to accommodate planned growth as noted in the County's General Plan and to accommodate the traffic from existing and planned commercial and residential development of the areas surrounding the proposed interchange. The improvements are also required by the previously approved Valley View Specific Plan conditions of approval.</p> <p>The U.S. 50/Silva Valley Parkway Interchange will include a six lane overcrossing (four through lanes and two deceleration lanes to the loop on-ramps), new signalized diagonal off-ramps, diagonal on-ramps, and loop on-ramps. The mainline will be improved to include east and west auxiliary lanes between El Dorado Hills Boulevard and the new interchange.</p> <p>More specifically, the project includes the following improvements:</p> <ul style="list-style-type: none"> <li>• The interchange design is a partial cloverleaf with loop on-ramps in the northeast and southwest quadrants and diagonal on- and off-ramps in each direction of travel on the freeway.</li> <li>• Continuous auxiliary lanes are proposed between El Dorado Hills Boulevard and the Silva Valley Parkway interchange connecting the on-ramps with off-ramps.</li> <li>• A 1,000' and 1,300' auxiliary lane will be constructed at the eastbound diagonal on-ramp and westbound diagonal off-ramp, respectively.</li> <li>• The Silva Valley Parkway overcrossing would be constructed over the freeway (U.S. 50) and would provide a minimum of 16.5 feet of vertical clearance over U.S. 50. The structure would have four lanes for through traffic on Silva Valley Parkway in addition deceleration lanes for the loop on-ramps and turn pockets at the intersections.</li> <li>• The ramp intersections will be signalized.</li> <li>• New ramp crossings at Carson Creek and Clarksville Road will require new structures. The new Clarksville Road ramp undercrossing will have a vertical clearance of 15 feet minimum.</li> <li>• Safety lighting and signs will be constructed.</li> </ul>		

December 8, 2010

- On-ramps would be designed to accommodate future ramp metering, HOV lanes and California Highway Patrol enforcement areas.
- The existing Silva Valley Road at the Clarksville Road Underpass will remain a 2 lane local road with class 2 bike lanes on each side of the road and a concrete sidewalk on the west side.
- Class II bicycle facilities will be provided either as part of the new interchange, or as part of the existing undercrossing.
- The existing Tong Road north of the freeway will be relocated to continue to provide access to the parcels in the northeast quadrant. The connection to Silva Valley Parkway will restrict left out movement. This connection is temporary and will be removed once County Club Drive is constructed. The County is currently designing Country Club Drive as a separate project.
- All public utility facilities impacted by the proposed project will be relocated and/or accommodated as necessary within one of three potential utility corridors.

**ENVIRONMENTAL SETTING:** The general area surrounding the project site is rural and includes rolling grasslands with scattered oaks. Carson Creek flows north-south east of the proposed interchange location. Land uses on the north side of Route 50 include residential development, Oak Meadows Elementary School and a church. Land uses on the south side of Route 50 include a Pacific Gas and Electric Company substation, the El Dorado Hills Town Center commercial development, office development, and agricultural grazing land. Two roads connect development north and south of Route 50: El Dorado Hills Boulevard to the west of the project and White Rock Road/Silva Valley Parkway in the project vicinity.

Existing U.S. 50 roadway has standard 12-foot lanes, 10-foot outside shoulders and a minimum of 10-foot inside shoulders (with HOV project completed, the shoulders range from 10-foot wide to 25-foot. There is an eastbound truck-climbing lane on Bass Lake Grade through the interchange location to provide for slow trucks on the existing 7% mainline grade east of the interchange. This truck climbing lane terminates at the top of the grade just before the Bass Lake Road interchange.

The Existing "Old" Silva Valley road is a north-south arterial serving the El Dorado Hills Community. Silva Valley Road crosses under U.S. 50 and is a 2-lane facility as it crosses under U.S. 50.

**DETERMINATION:** The Silva Valley Parkway Interchange on U.S. 50 was originally approved in 1991 by El Dorado County in response to growth projections outlined in the El Dorado County General Plan and forecast traffic volumes. The decision to approve the project was made after certification of an Environmental Impact Report (EIR) prepared pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) which evaluated two interchange design preferred alternatives: 1) the Undercrossing Design Alternative, and 2) the Ridge Design Alternative? A number of factors have occurred that have prevented construction of the interchange as approved, including but not limited to the current fiscal crisis and downturn in the residential housing market. As a result of the delay in implementation, the project engineers have re-examined the design and determined that the Undercrossing Design is infeasible because it does not meet Caltrans's current interchange spacing standards that require a design exception to locate a new interchange closer than 1 mile from an existing interchange, and because of other site constraints. The Ridge Design is therefore the only feasible design remaining from those originally analyzed. Minor design refinements have occurred to the Ridge Design since its approval in 1991. After considering the proposed refinements to the proposed interchange project through this modified Initial Study/Checklist as described below, and the changes in applicable statutes, regulations, the County General Plan, and revised future growth projections, the County determined that preparation of a Supplemental EIR was appropriate.

This modified Initial Study/Checklist was used to determine whether and to what extent the 1991 Final Environmental Impact Report Silva Valley Parkway Interchange with U.S. Highway 50 (Silva Valley FEIR) remains sufficient for addressing the potential impacts of the new modified proposed project, or whether a

**ADMINISTRATIVE DRAFT/ATTORNEY CLIENT PRIVILEGED**

December 8, 2010

supplemental or subsequent environmental impact report was required. Applicable Statutory Sections from the Public Resources Code that guide this determination are as follows:

Public Resources Code Section 21166 requires that when an environmental impact report has been prepared for a project pursuant to this division, no subsequent or supplemental environmental impact report shall be required by the lead agency or by any responsible agency, unless one or more of the following events occurs:

- a) Substantial changes are proposed in the project that will require major revisions of the environmental impact report.
- b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report.
- c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

Public Resources Code Section 21068 defines significant effect as follows: “Significant effect on the environment” means a substantial, or potentially substantial, adverse change in the environment.”

Sections 15163 of the CEQA Guidelines establishes that a lead or responsible agency, as the County here, may choose to prepare a supplement to an EIR rather than a subsequent EIR if: (1) Any of the conditions described in Section 15162 of the CEQA Guidelines governing preparation of Subsequent EIRs and Negative Declarations, would require the preparation of a Subsequent EIR, and (2) Only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation. A Supplemental EIR need contain only the information needed to make the prior EIR adequate for the project as revised. (§ 15163, subd. (b).)

**(ADDITIONAL / NO ADDITIONAL IMPACT FINDING):** Because only minor changes or additions were necessary to make the prior EIR adequately apply to the revised proposed project under the County determined that preparation of a Supplemental EIR was adequate.

**Prepared by:** (Individual’s name.)

**Date:**

(Agency name, address, and telephone.)

***All referenced documentation is available for Public Review at the (insert relevant location)***

**ADMINISTRATIVE DRAFT/ATTORNEY CLIENT PRIVILEGED**

December 8, 2010

In conjunction with this modified Initial Study/Checklist, the County prepared a comparison spreadsheet of the current Ridge Design project impacts with those impacts/mitigation measures summarized from the 1991 EIR. The spreadsheet examines each of the environmental issues areas and includes a summary of impacts level of significance, and mitigation measures, level of significance after mitigation, and a comparison impact discussion of the current project. This spreadsheet summary analysis was used by the County as internal means to assess the changes that have occurred to the project design, conditions and regulatory environment since the 1991 EIR was certified.

**Attachments Following Checklist**

Other referenced documents and correspondence are available for review at the (insert relevant location)

# MODIFIED INITIAL STUDY/ ENVIRONMENTAL CHECKLIST

## COMPARING CHANGES AND/OR NEW INFORMATION TO PREVIOUS EIR

The purpose of this modified initial study/checklist is to evaluate, under Public Resources Code Section 21166 and CEQA Guidelines Sections 15162 and 15163, whether there have been substantial changes to the project which would require major revisions to the previous EIR (versus minor changes), whether there have been substantial changes with respect to the circumstances under which the project is undertaken due to the involvement of new significant environmental effects or a substantial increase in the severity of significant environmental effects, or whether new information which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified shows: (a) the project will have one or more significant effects not discussed in the prior EIR; (b) significant effects previously identified would be substantially more severe than shown in the prior EIR; (c) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the measure or alternative; or (d) mitigation measures or alternatives conservatively different from those considered in the prior EIR would substantially reduce one or more significant effects on the environment but the project proponent declines to adopt the mitigation measure or alternative. (§ 15162, subd. (a)(3)(A)-(D).) A Supplemental EIR may be prepared if any of the above conditions occur, but only minor additions or changes are needed to the prior EIR to apply to the project as revised. A “no” answer does not necessarily mean that there are no potential impacts relative to the environmental category, but that there are no relevant substantial changes in the condition or status of the impact due to its insignificance or its treatment in the prior EIR.

Findings and a Statement of Overriding Considerations were adopted with the prior approval of the project and certification of the EIR. If the revised project is approved by the County decision-makers, new CEQA Findings will be required for each significant effect identified in the SEIR and prior EIR if they remain significant. (§ 15163, subd. (e).)

### EXPLANATION OF CHECKLIST EVALUATION CATEGORIES:

#### **Where Impact was Analyzed in Prior Environmental Documents and Remains Unchanged**

This column provides a cross-reference to the pages of the other environmental documents where information and analysis may be found relative to the environmental issue listed under each topic.

#### **Do Proposed Changes Involve New or More Severe Impacts?**

Pursuant to Section 15162(a)(1) of the CEQA Guidelines, this column indicates whether the changes represented by the proposed project will result in new impacts that have not already been considered and mitigated by the prior EIR, as set forth above, or that substantially increase the severity of a previously identified impact. If a “yes” answer is given, additional mitigation will be specified in the discussion section including a statement of impact status after mitigation.

#### **Any New Circumstances Involving New or More Severe Impacts?**

Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (environmental setting) that have occurred subsequent to the certification of an EIR,

December 8, 2010

which would result in the proposed project having significant impacts that were not considered or mitigated by that EIR or which substantially increase the severity of a previously identified impact.

**Any New Information Requiring New Analysis of Verification?**

Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column indicates whether new information is available requiring an update to the analysis of a previous EIR to verify that the environmental conclusions and mitigations remain valid. This also applies to any new regulations that might change the nature of analysis or the specifications of a mitigation measure. If additional analysis is conducted as part of this initial study and the environmental conclusion remains the same, no new or additional mitigation is necessary. If the analysis indicates that a mitigation measure requires supplemental specifications, no additional environmental documentation is needed if it is found that the modified mitigation achieves a reduction in impact to the same level as originally intended.

**Prior Environmental Document Mitigations Implemented or Address Impacts.**

Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column indicates whether other environmental documents provide mitigations to address effects in the related impact category. If NA is indicated, a previous environmental document and this initial study conclude that the impact does not occur with this project, and therefore no mitigation is needed.

**DISCUSSION AND MITIGATION SECTIONS**

A discussion of the elements of the checklist is provided under each environmental category in order to clarify the answers. The discussion provides information about the particular environmental issue, how the project relates to the issue and the status of any mitigation that may be required or that has already been implemented.

**Standard Mitigation Measures**

Applicable Standard Mitigation Measures are listed under each environmental category.

**EIR Mitigation Measures**

Applicable mitigation measures from prior EIR that apply to the changes or new information are referenced under each environmental category.

**Special Mitigation Measures**

If changes or new information involve new impacts, special mitigations will be listed which will be included as project conditions to address those impacts.

December 8, 2010

## ENVIRONMENTAL CHECKLIST

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>1. Aesthetics. Would the project:</b>					
a. Have a substantial adverse effect on a scenic vista?	NA 1991 EIR, pp. 64 - 68	NA	NA	NA	NA
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	NA 1991 EIR, pp. 64 - 68	NA	NA	NA	NA
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	1991 EIR, pp. 64 - 68	No	No	No	Mitigation included in the 1991 EIR
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	1991 EIR, pp. 64 - 68	No	No	No	Mitigation included in the 1991 EIR

December 8, 2010

**Discussion:** The project site is located in unincorporated El Dorado County on U.S. 50. Chapter 5 (Aesthetics) in the 1991 EIR describes the project site as rural, with U.S. 50 being the principal urban feature. Since that time, the project area has become more urbanized. The project site contains scattered rural residential and commercial land uses. Views from project roadways include rolling hills covered with low grasses, rocks and boulders, and occasional trees. Lighting in the project area is restricted to existing commercial and residential uses adjacent to the roadway generally to the west of the site as well as traffic on U.S. 50. No street lighting currently exists in the project area. There are no scenic vistas or substantial scenic resources located in the immediate vicinity of the site. This segment of U.S. 50 is not a designated scenic highway. Based on this information, no major changes in the project or its circumstances have occurred since certification of the 1991 Silva Valley Parkway Interchange EIR, nor has new information requiring analysis or verification been submitted.

The proposed interchange would also require tree removal, extensive grading, and a substantial amount of fill in order to create the highway overcrossing. Therefore, implementation of the proposed project has the potential to adversely affect the scenic nature of the rolling foothill landscape and views of the project site from adjacent vantages. Implementation of the proposed project would result in a visual change with the existing setting caused by the alteration of the current view sheds and an increase in the ambient night light due to safety lighting and headlights from cars using the interchange. The proposed project will incorporate policies from the 2004 El Dorado County General Plan related to visual and aesthetic resources. As identified in the 1991 EIR for the proposed project, the mitigation measures below would reduce the aesthetic impacts of the project to a less-than-significant level.

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:**

- The County will prepare and implement a landscape plan. The landscaping plan shall be prepared by a qualified biologist and shall focus on the planting of native oaks and other native species removed by project construction. Design goals of the landscape plans should be to integrate the natural vegetation and slopes with the interchange plans and to buffer the visual impact from adjacent residential land uses. The plan shall include long-term maintenance agreements and funding sources. The plan shall be reviewed and approved by the County and Caltrans prior to construction.
- The County shall prepare a lighting plan identifying the location of light standards, lighting height, wattage, type of lamps, and direction of lighting. The County should direct all necessary lighting away from surrounding land uses. Prior to construction, Caltrans shall review the lighting plan to ensure that minimum lighting requirements for the interchange are met.

**Special Mitigation Measures:** NA

December 8, 2010

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<p><b>2. Agriculture and Forestry 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. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</b></p>					
<p>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?</p>	<p>NA 1991 EIR, pp. 59 - 62</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>
<p>b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>	<p>1991 EIR, pp. 59 - 62</p>	<p>No</p>	<p>No</p>	<p>Yes</p>	<p>No Mitigation Required</p>
<p>c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland</p>	<p>NA 1991 EIR, pp. 59 - 62</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>

**ADMINISTRATIVE DRAFT/ATTORNEY CLIENT PRIVILEGED**

December 8, 2010

(as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?					
d. Result in the loss of forest land or conversion of forest land to non-forest use?	NA 1991 EIR, pp. 59 - 62	NA	NA	NA	NA
e. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	1991 EIR, pp. 59 - 62	No	No	No	No Mitigation Required
<p><b><u>Discussion:</u></b> The existing land uses adjacent to the project site includes one-family residential, Open Space, Agricultural, Commercial, General Commercial, and Recreational. Loss of grazing lands in the county would be less than 0.01 percent and removal from the Williamson Act contracts would be required as a result of the proposed project. Chapter 4 (Land Use) in the 1991 EIR stated that lands in the vicinity of the project were zoned Exclusive Agriculture and were located northeast of the project area and south of the highway.</p> <p><b><u>Standard Mitigation Measures:</u></b> NA</p> <p><b><u>EIR Mitigation Measures:</u></b> The 1991 EIR did not include mitigation measures to address loss of agricultural land/productivity since the impact was less than significant.</p> <p><b><u>Special Mitigation Measures:</u></b> NA</p>					

December 8, 2010

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>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:</b>					
a. Conflict with or obstruct implementation of the applicable air quality plan?	NA 1991 EIR, pp. 173 - 187	NA	NA	NA	NA
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	NA 1991 EIR, pp. 173 - 187	NA	NA	NA	NA
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	1991 EIR, p. 178	No	No	No	Mitigation included in the 1991 EIR
d. Expose sensitive receptors to substantial pollutant concentrations?	1991 EIR, pp. 178 - 187	No	No	No	Mitigation included in the 1991 EIR
e. Create objectionable odors affecting a substantial number of people?	NA 1991 EIR, pp. 173 - 187	NA	NA	NA	NA

December 8, 2010

**Discussion:** Air quality was analyzed in Chapter 11 in the 1991 EIR. The project area is located within the Mountain Counties Air Basin (MCAB). The San Francisco Bay Area Air Basin and the Sacramento Valley Air Basin lay to the west, and the San Joaquin Valley Air Basin is located to the south. The MCAB is comprised of Plumas, Sierra, Nevada, Placer (middle portion), El Dorado (western portion), Amador, Calaveras, Tuolumne, and Mariposa counties. The basin lies along the northern Sierra Nevada mountain range, close to or contiguous with the Nevada border, and covers an area of roughly 11,000 square miles. The western slope of El Dorado County, from Lake Tahoe on the east to the Sacramento County boundary on the west, lies within the MCAB. Elevations range from over 10,000 feet at the Sierra crest down to several hundred feet above sea level at the Sacramento County boundary. Throughout the county, the topography is highly variable, and includes rugged mountain peaks and valleys with extreme slopes and differences in altitude in the Sierras, as well as rolling foothills to the west.

The general climate of the MCAB varies considerably with elevation and proximity to the Sierra ridge. The terrain features of the basin make it possible for various climates to exist in relatively close proximity. The pattern of mountains and hills causes a wide variation in rainfall, temperature, and localized winds throughout the basin. Temperature variations have an important influence on basin wind flow, dispersion along mountain ridges, vertical mixing, and photochemistry. The Sierra Nevada receives large amounts of precipitation from storms moving in from the Pacific in the winter, with lighter amounts from intermittent “Monsoonal” moisture flows from the south and cumulus buildup in the summer. Precipitation levels are high in the highest mountain elevations but decline rapidly toward the western portion of the basin. Winter temperatures in the mountains can be below freezing for weeks at a time, and substantial depths of snow can accumulate, but in the western foothills, winter temperatures usually dip below freezing only at night and precipitation is mixed as rain or light snow. In the summer, temperatures in the mountains are mild, with daytime peaks in the 70s to low 80s degrees Fahrenheit (F), but the western end of the county can routinely exceed 100 degrees F.

In 2004, the Sacramento region was classified as a “serious” 8-hour ozone nonattainment area with an attainment deadline of June 15, 2013. However, the Sacramento region needs to rely on the long-term emission reduction strategies from State and federal mobile source control programs that have not fully realized their emission benefits, and as a result the 2013 attainment date cannot be met. On February 14, 2008, ARB, on behalf of the air districts in the Sacramento region, submitted a letter to EPA requesting a voluntary reclassification (“bump-up”) of the Sacramento Federal Nonattainment Area from a “serious” to a “severe” 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019.

The air districts in the Sacramento Valley 8-hour Ozone Planning Area held public hearings in early 2009 to adopt the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan. The Plan shows that the region is meeting minimum emission reduction progress and would reach the air quality standard no later than 2018. In addition, the plan makes commitments to adopt and implement new reasonably-available control measures.

From an air quality perspective, the topography and meteorology of the MCAB combine such that local conditions predominate in determining the effect of emissions in the basin. Regional airflows are affected by the mountains and hills, which direct surface air flows, cause shallow vertical mixing, and create areas of high pollutant concentrations by hindering dispersion. Inversion layers, where warm air overlays cooler air, frequently occur and trap pollutants close to the ground. In the winter, these conditions can lead to CO “hotspots” along heavily traveled roads and at busy intersections. During summer’s longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic compounds (ROG) and oxides of nitrogen (NOx) that results in the formation of ozone. Because of its long formation time, ozone is a regional pollutant rather than a local hotspot problem.

In the summer, the strong upwind valley air flowing into the basin from the Central Valley to the west is an effective transport medium for ozone precursors and

December 8, 2010

ozone generated in the Bay Area and the Sacramento and San Joaquin valleys. These transported pollutants predominate as the cause of ozone in the MCAB and are largely responsible for the exceedances of the State and federal ozone ambient air quality standards in the MCAB.

The proposed project will expose sensitive receptors to short-term pollutant concentrations as a result of the construction phase of the project. Mitigation measures stated below will be implemented to minimize the impacts to air quality. Once complete the project will not be generating any additional air pollution within the area.

As with the approved Ridge Design, the proposed project would not result in any direct increase in ozone precursors from construction or operation of the Interchange. The Interchange itself does not create traffic trips; rather, the Interchange is required to accommodate traffic generated by growth in the County and surrounding areas. The air quality impacts related to ozone precursors would therefore remain less than significant as was concluded in the 1991 EIR. During construction, however, the proposed project would continue to result in significant dust-related impacts, as identified in the 1991 EIR. Mitigation measures have been included in the proposed project to reduce this impact to a less than significant level.

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:**

- Construction-related dust emissions can be reduced by as much as 50 per cent by watering exposed earth surfaces during clearing, grading, earthmoving, and other site preparation work. The design plans will include provisions to control fugitive dust at all times either by use of water trucks or other methods.
- Applicant will notify residents of blasting operations prior to their occurrence, so they can take precautions against fugitive dust emissions (i.e. closing windows and placing cars in garages). The design plans will include provisions to comply with all applicable local, state, and federal safety and air quality regulations.
- Applicant will be required to properly maintain construction equipment. Proper maintenance minimizes emissions from internal combustion engines
- This mitigation measure was identified in the El Dorado Hills Specific Plan EIR and will need to be treated as a separate improvement project needed when the interchange V/C ratio reaches 0.75. This measure includes improving the El Dorado Hills/ U.S. 50 west bound ramps intersection by adding a fourth southbound through lane to El Dorado Hills Boulevard.

**Special Mitigation Measures:** NA

December 8, 2010

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>4. Biological Resources. Would the project:</b>					
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?	1991 EIR, pp. 106 - 113	No	No	No	Mitigation included in the 1991 EIR
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	1991 EIR, pp. 106 - 113	No	No	No	Mitigation included in the 1991 EIR
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, etc.) through direct removal, filling, hydrological interruption, or other means?	1991 EIR, pp. 106 - 113	No	No	No	Mitigation included in the 1991 EIR
d. Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	NA 1991 EIR, pp. 106 - 113	NA	NA	NA	NA
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	1991 EIR, pp. 106 - 113	No	Yes	Yes	Mitigation included in the 1991 EIR
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?	NA 1991 EIR, pp. 106 - 113	NA	NA	NA	NA

December 8, 2010

**Discussion:** Biological impacts were evaluated in Chapter 8 of the 1991 EIR. The vegetative communities of annual grassland and blue oak woodland described in the 1991 EIR are consistent in location and description with the currently existing conditions. The purple needlegrass grassland is described in the original EIR as being located at the drier margins of the freshwater marsh, and is mapped along the edges of the marsh areas. The current population of purple needlegrass appears to have shifted slightly from the 1987 location, so that it now lies along different edges of the marsh. The current area of purple needlegrass grassland is approximately one acre.

The plant community previously identified and mapped as live oak riparian woodland corresponds with valley foothill riparian habitat in the current map. In 1987, these riparian areas were dominated by live oak, with occasional trees and saplings of valley oak, cottonwood, and Gooding's willow. A current description reveals that valley oak and cottonwood are now dominant, with alder, buckeye, and assorted willows present. Canopy cover currently ranges from 20% to 80%.

Conditions at Carson Creek may have also changed. Lower Carson Creek was previously described as being low gradient, with little cover, and silt and cobble substrates. Recent fieldwork shows that the creek experiences routine high-flow events that scour and flush the streambed, and destroy some of the adjacent emergent vegetation.

Two definitive changes have occurred in the project site since the 1987 fieldwork was conducted. One is the presence of elderberry shrubs, which provide potential habitat for VELB; the other is the creation of a small pond.

In 1987, no elderberry shrubs were documented in the project area; four elderberries now exist just south of U.S. 50. Six shrubs are present just outside the project boundary to the southwest, by Joerger Road. VELB exit holes were observed in the elderberries within the project boundary. According to the 2005 Updated Biological Resource Assessment four shrubs will be impacted and require mitigation measures.

The 2005 Updated Biological Resource Assessment the purple needlegrass is a sensitive plant listed on the CDFG Natural Communities List. There is approximately 1.67 acres, and of which 0.09-acre is expected to be impacted by the proposed project. Since only 5.4 percent of this resource within the project area is expected to be impacted and the purple needlegrass grassland has nearly doubled since the 1991 EIR, the impact is expected to be less than significant.

A small, man-made pond/marsh of approximately 0.002 acre was created north of U.S. 50 in the eastern half of the site. The pond was not in existence in 1987. The pond provides suitable habitat for CRLF; the majority of the pond is open water and the edges support rushes and cattails. Protection of the pond/marsh from construction impacts would accrue and any aquatic habit that is loss will be enhanced to equal acreages and/or value. A Wetland Delineation Report was prepared for the project to classify and document the extent of wetlands under jurisdiction of the U.S. Army Corps of Engineers Foothill Associates (2005). The Wetland Delineation Report has been submitted to the U.S. Army Corps of Engineers for verification. According to the wetland delineation, approximately 9.2 acres of wetlands, including other waters of the U.S. occur within the project study area.

According to the 1991 EIR, implementation of the proposed project would result in loss of annual grassland habitat and blue oak woodland for several species. This loss of habitat will not have an adverse impact since both habitats are common within the region. According to the 2005 Updated Biological Resource Assessment impacts will accrue and mitigation measures will be required.

**Standard Mitigation Measures:** NA

December 8, 2010

**EIR Mitigation Measures:**

- The plan will be reviewed and approved by El Dorado County, Caltrans, and DFG before construction begins. The plan should describe impacts to the creek channels and associated riparian vegetation, identify the number of oak trees eliminated, explain the extent of impacts to wetland habitats and the purple needlegrass grassland, specify the location of fences to minimize impacts to existing vegetation, and describe the various plantings to be implemented.
- A qualified botanist will work with the design engineers to identify any oak trees that may be saved by minor revisions to the design.
- Implement the blue oak woodland vegetation measures.
- A qualified botanist will work with the design engineers and landscape architect for the project to replant the same species of oaks as are eliminated by the project. Replacement of oak trees will be based on the design guidelines found in the El Dorado Hills Specific Plan.
- The applicant will install fencing to avoid incidental impacts during construction in the vicinity of Carson Creek and the unnamed creek. The location and amount of fencing will be determined with the assistance of a qualified botanist. The fencing should be so located as to prevent unnecessary vehicle intrusion into the riparian areas and to prevent sidecasting of material into the riparian areas.
- A qualified botanist will work with the design engineers to replant riparian areas with woody vegetation. Plantings should be made along the same creek corridor in which the impacts occur. Plantings should be attempted in areas lacking a tree canopy. A 2:1 planting ration is acceptable for willows and cottonwoods. Maintenance and monitoring requirements are the same as those specified above under blue oak woodland.
- The applicant will install fencing to avoid incidental impacts during construction in the vicinity of the marshes and seeps. The location and amount of fencing will be determined with the assistance of a qualified botanist. The fencing should be erected around portions of the marsh that would not be eliminated by the project to prevent accidental encroachment or use of the site for material or equipment staging. In addition, the applicant should erect temporary concrete barriers along U. S. 50 to prevent sidecast material from falling into the creek channels and marshes.
- Establish a Wetland of Equal Acreage and Value or Enhance an Existing Degraded Wetland
- A qualified botanist will work with the design engineers to establish a wetland of equal acreage and value to replace the wetland lost through construction. Alternatively, an existing degraded wetland may be enhanced.
- The applicant will install fencing to avoid unnecessary impacts on purple needlegrass during construction. The location and amount of fencing will be determined with the assistance of a qualified botanist.
- A qualified botanist will identify a local site with compatible soils and hydrology to be planted with purple needlegrass. The objective of this measure is to establish grassland of a density equal to that of the site eliminated. A number of degraded seeps in the local area are considered suitable for this purpose.

**Special Mitigation Measures:** NA

December 8, 2010

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>5. Cultural Resources. Would the project:</b>					
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	1991 EIR, pp. 223 - 226	No	No	No	Mitigation included in the 1991 EIR
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	1991 EIR, pp. 223 - 226	No	No	No	Mitigation included in the 1991 EIR
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	NA 1991 EIR, pp. 223 - 226	NA	NA	NA	NA
d. Disturb any human remains, including those interred outside the formal cemeteries?	1991 EIR, pp. 223 - 226	No	No	No	Mitigation included in the 1991 EIR

**Discussion** The 1991 EIR (Chapter 13) described 11 cultural resources and subsequent field survey in 2010 has identified a total of one historic district and 41 sites, structures and features of sites including 10 of the cultural resources identified in the original EIR. The exception is Byram House, which is not included in the current project area. The proposed project design footprint will impact some cultural resources but all resources have been evaluated, documented and determined that they do not contain any significant cultural resources. Cultural resources near the project’s footprint will be fenced during the construction phase and relocation of State Historical Landmark Monument is possible depending on final interchange design. All construction work will comply with state procedures if cultural resources are discovered during construction.

Cultural resources that could be impacted are the following: Tong Cemetery, stamp mill site, cabin and privy site, Richmond-Hall Cemetery, Mormon Tavern Monument (California Historical Landmark no. 699), portion of a large multi-component site and potential impacts to unknown sites. Impacts will be less-than significant with mitigation measures implemented.

According to the El Dorado County General Plan EIR, there are no unique or paleontological resources or unique geologic features located on the project site.

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:**

- Should artifacts or unusual amounts of stone, bone, or shell be uncovered during vegetation clearance or other construction activities, the El Dorado County Department of Transportation and Caltrans will be notified immediately. If any bone appears to be human, the El

December 8, 2010

Dorado County Coroner and the Native American Heritage Commission must be contacted.

- An archeologist will determine whether the stamp mill, terrace, and cabin can be protected from all construction impacts by erecting temporary fencing during construction.
- An archeologist will identify the limits of the Hall/Richmond Cemetery. Applicant will install a 6-foot high chainlink fence on the perimeter of the site to limit construction impacts on the cemetery. After construction is complete, a low post-and-cable or similar fence will be installed to provide protection but also allow access.

**Special Mitigation Measures:** NA

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>6. Geology and Soils. Would the project:</b>					
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> <li>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.</li> <li>ii. Strong seismic ground shaking?</li> <li>iii. Seismic-related ground failure, including liquefaction?</li> <li>iv. Landslides?</li> </ul>	1991 EIR, pp. 75 - 81	No	No	No	Mitigation included in the 1991 EIR
b. Result in substantial soil erosion or the loss of	1991 EIR, pp.	No	No	No	Mitigation

**ADMINISTRATIVE DRAFT/ATTORNEY CLIENT PRIVILEGED**

December 8, 2010

topsoil?	75 - 81				included in the 1991 EIR
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?	1991 EIR, pp. 75 - 81	No	No	No	Mitigation included in the 1991 EIR
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?	NA 1991 EIR, pp. 69 - 81	NA	NA	NA	NA
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	NA 1991 EIR, pp. 69 - 81	NA	NA	NA	NA

**Discussion:** Chapter 6 of the 1991 EIR described the geologic setting of the project area, including: regional geology and seismicity, project landforms, bedrock geology and structure, surficial geology, mineral resources, seismic hazards, and springs and seepage areas. These descriptions of project site geology are still accurate and do not require further description. The proposed project design will meet state seismic guidelines. Erosion control measures will be in place to prevent loss of topsoil and prevent unstable soil. Potential of hazardous materials impacts were not discussed in the original 1991 EIR. Therefore, this issue area (setting, impacts, and mitigation measures) will be addressed in the Geology and Soils section of the SEIR. With respect to this Initial Study, however, hazardous materials will be described below in section 8.

There are no Earthquake Fault Zones subject to the Alquist-Priolo Earthquake Fault Zoning Act in El Dorado County. Additionally, no Seismic Hazard Zones have been identified in the County. Therefore, the County is not at risk from seismically-induced liquefaction, lateral spreading, landslides, avalanches, or seismic ground shaking.

The 1991 EIR described the geologic setting of the project area, including: regional geology and seismicity, project landforms, bedrock geology and structure, surficial geology, mineral resources, seismic hazards, and springs and seepage areas. These descriptions of project site geology are still accurate. The seismic issues of concern relate to groundshaking. The interchange project would be designed to comply with Caltrans seismic design standards and requirements; therefore, impacts involving seismicity would be considered less than significant for the project.

Construction of the proposed project would involve site grading, and due to the hard rock in the area, blasting may be required to construct the project. Construction activities would be completed according to Caltrans and El Dorado County design standards and are not expected to result in significant issues associated with landslides, ground subsidence or expansive soils. Construction activities would, however, result in the temporary disturbance of project site soils that could result in erosion.

Soil erosion and topsoil loss would be limited by implementing fugitive dust control measures as required by the El Dorado County Air Quality Management District. In addition, the project would be required to comply with Caltrans and El Dorado County regulatory requirements including: the El Dorado Grading, Erosion, and Sediment Control Ordinance that requires the development and implementation of an erosion control plan as well as the Caltrans Storm Water Quality Handbook requirements. Further oversight is provided by the local Resource Conservation District, which reviews Erosion Control Plans for County

December 8, 2010

discretionary projects. Because erosion control measures would be incorporated into the design and specifications of the project and would be implemented during project construction, the project impacts related to geology and soil erosion are considered less than significant.

**Standard Mitigation Measures:** NA

**EIR/Mitigation Measures:**

- Prepare a plan describing proposed earth and rock catchment devices for all construction areas where inadvertent sidestepping might allow such materials to reach project area watercourses. The plan should include suggestions for the removal of materials that reach streamcourses.
- Make the contractor and project inspectors aware of required environmental mitigations to reduce impacts that might otherwise occur.
- Remove and dispose of excess rock and soil (exclusive of topsoil) as engineered fill at an environmentally acceptable spoil location which has been properly investigated and designed. "Engineered" is hereby defined for the spoil sites to include such measures as keying, subdrainage, fill slopes generally no greater than 2:1 slope, benching as necessary, and proper compaction.
- If borrow sites are necessary, require a separate environmental review of their locations. Do not locate borrow sites in environmentally sensitive areas, i.e., close to drainage courses, within or in proximity to springs and seepage areas, or on excessively steep slopes where soil erosion would result. Following their use, these sites should be reclaimed.
- Stockpile topsoil removed during site preparation to use later where needed for revegetation.
- Develop and implement a projectwide erosion control program that complies with the "El Dorado County Erosion Control Requirements and Specifications." Implement the program prior to the first winter rains. Monitor the progress of the program yearly for 3 years and require additional planting, mulching, and fertilizing as necessary.
- Leave root crowns intact in areas requiring removal of vegetation, but not grading, so as to retard soil erosion.
- Prepare and implement a program of long-term project maintenance to ensure satisfactory performance of the project components. The program will include the regular cleaning and maintenance of culverts, ditches, trash racks, inlet structure, etc.
- Cover and/or fence all water wells, water boxes, and cisterns within the project right-of-way for safety reasons.
- Protect all project springs and seepage areas and the sources of their waters. This can best be accomplished by avoiding such areas or by constructing bridges over them.
- If project construction requires blasting, comply with all applicable local, state, and federal safety regulations.
- Temporarily fence off all spring/seepage areas during the construction period to eliminate possible disturbance by equipment.
- Temporarily fence off riparian corridors during construction.
- Develop and implement a site-specific erosion control plan to minimize both short-term effects due to construction and the long-term effects resulting from permanent changes caused by the proposed facilities.
- Short-term control measures will include use of some of the following structures or procedures to minimize erosion, siltation and stream degradation

December 8, 2010

impacts:

- Filter berms,
- Sandbag or straw bale barriers,
- Siltation retention fences,
- Vegetation filter strips, and
- Erosion checks (installation of porous mat-like material in slit trench and oriented perpendicular to the direction of flow).

Also:

- Remove from active stream channels any collections of earthen debris or trash resulting from construction activities,
- Install drop inlets and risers to deduce discharge velocity and to capture silt,
- Keep the width of the corridor that would be disturbed by construction of project facilities to an absolute minimum by placing chain link fences and signs at the edge of the construction area, and
- Divert the waters of the project creeks past the construction area via culverts if construction occurs during the period of active tow.

Long-term measures include:

- Implementing the revegetation program described in the General Mitigations section, and
- Installing permanent erosion control facilities, as necessary, such as energy dissipaters at all outfalls, hydraulic jumps on steep gradient ditches, and lining all drainage ditches on slopes steeper than 10 percent.

**Additional Mitigation Measures for the Ridge Design:**

- Continue the 290-foot-long retaining wall proposed for the eastbound off-ramp about an additional 100 feet. This would eliminate the need for an embankment along this interval and the related extension of the existing box culvert. The effect would be to reduce the possibility that year-round spring waters that issue from and around the culvert outfall would be disrupted. These waters are critical to maintaining the riparian area immediately south of the box culvert and are also probably critical to maintaining the large seepage area located a few hundred feet to the southeast.

**Special Mitigation Measures:** NA

December 8, 2010

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>7. Greenhouse Gas Emissions. Would the project:</b>					
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	NA	NA	NA	No	NA
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases?	NA	NA	NA	No	NA

**Discussion**

**OVERVIEW OF GREENHOUSE GASES AND CLIMATE CHANGE**

Various gases in the earth’s atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth’s surface temperature. Solar radiation enters the earth’s atmosphere from space. A portion of the radiation is absorbed by the earth’s surface, and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth, not as high-frequency solar radiation, but lower frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon is known as the “greenhouse effect.”

Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), ozone (O<sub>3</sub>), water vapor, nitrous oxide (N<sub>2</sub>O), and chlorofluorocarbons (CFCs). Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, and transportation, residential, commercial, and agricultural sectors (California Energy Commission [CEC] 2006a). In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CEC 2006a). Emissions of CO<sub>2</sub> are byproducts of fossil fuel combustion. CH<sub>4</sub>, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) is largely associated with agricultural practices and landfills. CO<sub>2</sub> sinks, or reservoirs, include vegetation and the ocean, which absorb CO<sub>2</sub> through sequestration and dissolution, respectively, two of the most common processes of CO<sub>2</sub> sequestration.

December 8, 2010

California is the 12th to 16th largest emitter of CO<sub>2</sub> in the world (CEC 2006a). California produced 468.8 million gross metric tons of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) in 2004 (ARB 2008a).<sup>1</sup> Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2004, accounting for 41% of total GHG emissions in the state (CEC 2006a). This sector was followed by the electric power sector (including both in-state and out-of-state sources) (22%) and the industrial sector (21%) (CEC 2006a).

According to the Intergovernmental Panel on Climate Change, global average temperature is expected to increase by 3–7° F by the end of the century, depending on future GHG emission scenarios (IPCC 2007). Resource areas other than air quality and atmospheric temperature could be indirectly affected by the accumulation of GHG emissions. Impacts of global climate change on California's environment are expected to include:

- A 30 to 90 percent reduction of the Sierra snowpack in the next 100 years, including earlier melting and runoff;
- An increase in water temperatures at least commensurate with the increase in air temperatures;
- A 6 to 30 inch rise in sea level, before increased melt rates from the dynamical properties of polar ice-sheet melting are taken into account;
- An increase in the intensity of storms, the amount of precipitation and the proportion of precipitation as rain versus snow;
- Adverse effects to ecosystems and species, including changes in the timing of life events, shifts in range, and community abundance shifts;
- A 200 to 400 percent increase in the number of heat wave days in major urban centers;
- An increase in the number of days meteorologically conducive to ozone formation;
- An increase in the expected risk of wildfires.

(CCCC, 2006).

Several studies have been prepared that provide evidence that changes in the climate will lead to impacts on California's water supplies. In the study, *Climate Warming and California's Future*, prepared by the Center for Environmental and Water Resources Engineering Department of the University of California, Davis, it is reported that different climate warming scenarios indicate a significant increase in wet season flows as well as decreases in spring runoff from snowmelt. The state's water system could adapt to the various climate scenarios through the use of new technology for supplying and treating water, water transfers, conjunctive use, and through the cooperation of local, regional, state and federal government. The study found that the users that would be most impacted would be the agricultural sector, particularly in southern California. (Lund, 2003).

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<sup>1</sup> / CO<sub>2</sub>e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

December 8, 2010

**PROJECT EFFECTS ON GLOBAL CLIMATE CHANGE**

The 1991 EIR did not address Greenhouse Gas (GHG) Emissions pertaining to global climate change as this issue was not an environmental concern in 1991. Since the certification of the 1991 EIR, the California state government has amended the CEQA Guidelines to require consideration of a project’s impacts with respect to greenhouse gas emissions.

The proposed project would result in short-term construction emissions (including GHG emissions) that may contribute to global climate change. During the construction phase of the project, there is the potential to contribute to the generation of GHG emissions. Construction emissions were estimated for the project using the Sacramento Metropolitan Air Quality Management District’s Road Construction Emissions Model, Version 6.3.2. Total CO2 emissions for construction of the project are estimated at 696 metric tons.

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:** Air Quality mitigation measures in Section 3 indicated in the Air Quality section will reduce the project’s GHG contribution.

**Special Mitigation Measures:** NA

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>8. Hazards and Hazardous Materials. Would the project:</b>					
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	NA	NA	NA	No	NA
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?	NA	NA	NA	No	NA
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed	NA	NA	NA	NA	NA

**ADMINISTRATIVE DRAFT/ATTORNEY CLIENT PRIVILEGED**

December 8, 2010

school?					
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	NA	NA	NA	Yes	NA
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	NA	NA	NA	NA	NA
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working on the project area?	NA	NA	NA	NA	NA
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	NA	NA	NA	NA	NA
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?	NA	NA	NA	NA	NA
<p><b><u>Discussion:</u></b> Potential hazardous materials impacts were not discussed in the original 1991 EIR. An Initial Site Assessment was prepared by Blackburn for the proposed project in April of 2007. There are six parcels were identified as having potential hazardous waste or materials contamination. These hazardous materials could include the following: pesticides, aerially deposited lead, transformers, yellow traffic stripes and underground product distribution lines. The project site is located in a geologic region identified as having at or near surface naturally occurring asbestos (NOA) bearing rocks and soils. Consequently, any development and/or construction in this area must comply with applicable rules and regulations, as written by El Dorado County Environmental Health Department. NOA-bearing rocks and soils potentially affect all parcels.</p> <p><b><u>Standard Mitigation Measures:</u></b> NA</p> <p><b><u>EIR Mitigation Measures:</u></b> Hazardous wastes/materials were not addressed in the 1991 EIR. No mitigation measures were identified.</p> <p><b><u>Special Mitigation Measures:</u></b> NA</p>					

Environmental Issue Area	Where Impact	Do Proposed	Any New	Any New	Prior
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December 8, 2010

	Was Analyzed in Prior 1991 EIR.	Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Information Requiring New Analysis or Verification?	Environmental Documents Mitigations Implemented or Address Impacts.
<b>9. Hydrology and Water Quality. Would the Project:</b>					
a. Violate any water quality standards or waste discharge requirements?	NA 1991 EIR, pp. 87 - 96	NA	NA	NA	NA
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)?	1991 EIR, pp. 87 - 96	No	No	No	Mitigation included in the 1991 EIR
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?	1991 EIR, pp. 87 - 96	No	No	No	Mitigation included in the 1991 EIR
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?	1991 EIR, pp. 87 - 96	No	No	No	No
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?	1991 EIR, pp. 87 - 96	No	No	No	No
f. Otherwise substantially degrade water quality?	1991 EIR, pp. 87 - 96	No	No	No	Mitigation included in the 1991 EIR
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?	1991 EIR, pp. 87 - 96	No	No	No	Mitigation included in the 1991 EIR

December 8, 2010

h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	NA 1991 EIR, pp. 87 - 96	NA	NA	NA	NA
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	NA 1991 EIR, pp. 87 - 96	NA	NA	NA	NA
j. Inundation by seiche, tsunami, or mudflow?	NA 1991 EIR, pp. 87 - 96	NA	NA	NA	NA

**Discussion:** Chapter 7 in the previously prepared 1991 EIR described the hydrologic setting of the project area, including Climate and Groundwater Hydrology. These descriptions of the project site are still accurate and do not require further description.

In the areas of Surface Hydrology and Water Quality, the project setting has changed to some extent. The 1991 EIR stated that three intermittent streams flow through the project area and drain the site and upstream watersheds. However, the project site now has only two intermittent streams, Carson Creek and an unnamed stream. Flows for Carson Creek and the smaller unnamed stream were only estimated in the 1991 EIR. Hydrologic modeling of the watershed now shows that flows at Carson Creek are approximately 1,000 to 2,000 cubic feet per second (cfs), and flows in the unnamed stream are approximately 700 to 800 cfs. Finally, the 1991 EIR describes historic storm events occasionally causing Carson Creek to overflow its banks and flood Latrobe Road. Recent roadway and channel improvements in and around Latrobe Road have eliminated flooding issues in that area. New urban development has also increased runoff from paved surfaces in the project area.

Impacts could include changes in peak flow characteristics and runoff volumes, modified in drainage flow patterns as a result of changes in the topographic features and an increase in impervious surface with the addition of the interchange structure. Some sections of a natural streambed would be placed into culverts. Possible water quality impacts could occur in the short-term as a result from construction activities, including increased turbidity and sediment loading from grading activities. Pollutants could also be transported to adjacent water bodies by heavy equipment and the improper handling and/or disposal of construction materials. Project operation also has the potential to result in water quality impacts from “first-flush runoff from the new impervious surface area.

The 1991 EIR also considered that groundwater seeps are known to occur in the area. Construction of the proposed project could result in soil compaction which could create a barrier to shallow groundwater movement or it could result in the opening of closing of water bearing fractures in the bedrock.

These impacts were considered potentially significant. Mitigation measures, including Best Management Practices specified in Caltrans’ *Storm Water Quality Handbook - Planning and Design Guide*, shall be identified for any significant water quality impacts that may occur during construction and/or operation of proposed interchange and supporting circulation network.

The project does not include housing or the placement of structures within a 100-year flood hazard area. Additionally, the project is not susceptible to inundation by seiches, tsunami, or mudflow.

**Standard Mitigation Measures:** NA

December 8, 2010

**EIR Mitigation Measures:**

**Size Culverts In Accordance With El Dorado County and Caltrans Requirements**

- The design drawings for the project will be reviewed and approved by El Dorado County and Caltrans. All improvements will comply with the requirements of these two agencies.

**Acquire Ponding Easements from Owners of Affected Properties**

- Modifications in site drainage produced by culvert installation and topographic alterations should be analyzed to determine areas of possible flooding from the 100-year flood consistent with Flood Insurance Administration criteria. Owners of parcels whose property could be inundated by design floodwaters should be informed of the risks and easements should be acquired to pond water on their property. Future owners would be informed before they purchased any of the affected parcels, because the easement would be recorded on the deed.

**Install Erosion Control Measures at Outlets and Implement El Dorado County Resource Conservation District Requirements**

- Pursuant to El Dorado County RCD requirements, erosive velocities will be identified by the project engineer; riprap or other erosion control measures will be installed at all drainage outlets, if determined to be necessary.

**Provide Adequate Subgrade Drains As Determined Necessary by a Geotechnical Engineer**

- The preliminary design drawings will be reviewed by a geotechnical engineer, experienced in the movement of groundwater, prior to approval by the county and Caltrans. Where adverse impacts of alterations of groundwater movement can be prevented by draining subsurface water, subgrade drains will be installed. Recommendations should be based on site reconnaissance, subsurface explorations, and consultation of applicable literature.

**Require Review of the Design Plans by a Geotechnical Engineer**

- The preliminary design drawings will be reviewed by a geotechnical engineer, experienced in the movement of groundwater, prior to approval by the county and Caltrans. A report shall be prepared and reviewed by the El Dorado County Department of Transportation and Caltrans, indicating whether changes should be made to protect the spring area.

**Minimize Activity in the Spring Area**

- Construction details, including the following, will be prepared to minimize activity in the spring area:
  - Before construction, install a 6 foot high fence to delineate the boundaries of the environmentally sensitive areas within and in proximity to the project. Show these areas on final design drawings. These areas shall not be disturbed by construction activities either directly (by equipment or material) or indirectly (by sidecasting of soil and/or rock or other waste materials). The grading contractor and all other contractors shall be notified as to the existence of these sensitive areas.
  - The construction plans will include a detailed erosion control plan. The erosion control plan requires approval by the U.S. Soil Conservation Service, El Dorado County Department of Transportation, and Caltrans. The erosion control plan must be fully implemented between October 15 and May 15 of successive years. The plan will be reviewed prior to September 15 of the year grading commences. At this time, an inspection schedule of erosion control practices will be agreed. On.
  - Install catchment devices for construction areas where inadvertent sidecasting might result in materials sliding or rolling into streamcourses.
  - Require cleanup of instream areas after completion of all construction.

**Implement a Water Quality Monitoring Program**

- **Purpose.** Approval of the interchange could possibly cause short-term impacts for Carson Creek. Although it is recognized that this creek is ephemeral

December 8, 2010

in nature, it has considerable flow during periods of high precipitation. Water quality impacts would occur primarily during construction activities and the two following years until vegetation reestablishes itself.

- The following sections describe the water quality parameters suggested for monitoring, the rationale for their selection, and identify responsible parties who would oversee and monitor the program. A review and assessment of the monitoring program also is suggested to ensure that the foals of the monitoring program are being met. This review and assessment also would provide a mechanism for the monitoring program's future termination.
- **Objectives.** The primary objective of the monitoring program is to ensure that the creek maintains its natural state and that water quality is suitable for a wide variety of recreational and aesthetic uses.
- It should be noted that sediment loads in creeks, rivers, and other waterways can vary substantially between storm events and are dependent on various events. Suspended sediment loads can vary by orders of magnitude in unaffected streams. Baseline data on the variations in sediment loads prior to construction activities, are required to ensure proper implementation of any monitoring program.
- **Possible Construction Activity Impacts.** Construction activities such as grading, bulldozing, leveling, and trenching could increase erosion and cause sediment to be transported to downstream areas. Although soil development in the project vicinity is not extensive, thin soil mantles have developed on the metasedimentary rocks that form the Sierra Nevada foothill belt.
- To prevent transport of disturbed soils to the creek systems, a detailed erosion control plan will be developed as required by the El Dorado County RCD. The plan will include designs and will recommend other techniques for controlling sediment loss on project lands and prohibit construction activities when sediment transport potentials are high.
- **Water Sampling.** Water samples from the creek should be collected during substantial storm events (equal to or greater than 0.5 inch of precipitation) to generate a set of data on the natural sediment loads and turbidity levels in the creek prior to construction. Table 7-1 shows the parameters recommended for sampling, rationale for sampling, and sampling interval. These data would provide the baseline upon which possible construction impacts could be evaluated. A minimum of two samples should be collected, one upstream of the project site and one downstream of the project site, during storm events. This would assist in interpretation of data and ensure that representative samples are collected.
- In the event that there is a dry year and no samples can be collected, samples should be taken the following year. Streamflow can either be estimated by a qualified person trained in streamflow gagging or be calculated from actual field measurements.
- Water samples should be collected in appropriate containers provided by a contract laboratory and analyzed for the following parameters: total suspended solids, turbidity, and general minerals. Samples should be analyzed by a State of California certified laboratory. Total sediment loads for each creek for each storm event should be calculated using streamflow measurements or estimates and laboratory data.
- **Reporting Requirements.** Annual reports should include laboratory data, streamflow measurements, and interpretations of data. These reports would be forwarded to the RCD for review, thereby providing the RCD with an opportunity to evaluate the monitoring program and make the changes they feel are necessary to improve the monitoring program. Interpretation of data and preparation of reports should be conducted by a hydrologist, sedimentologist, or equally qualified individual.
- **Monitoring Program Review and Goal Assessment.** The primary focus of the program is to protect the creek from negligent construction activities. Completion of the interchange is estimated to take place within 10 years. The program should be evaluated annually, subsequent to acquiring baseline information, to determine its effectiveness. If efficiently, RCD can decide to terminate the monitoring program. In contrast, if significant impacts are

December 8, 2010

observed, RCD may make the necessary changes in the erosion control plans or increase water sampling and data collection

**Provide an Alternate Water Supply for Livestock**

- If access to the spring waters is inhibited or otherwise prevented, an alternate water supply for livestock should be provided during construction. If spring water could be consumed, or other direct contact uses were permitted by livestock or humans during construction, the construction site should be posted to prevent such an occurrence.

**Implement Precautionary Measures During Construction To Minimize Water Quality Degradation**

- The design drawings for the project will include a detailed erosion control plan prepared to the satisfaction of El Dorado County RCD and Caltrans prior to approval of a grading permit.
- The degree of water quality degradation that could occur during construction is greatly dependent on the precautions taken during the design and construction period. The following measures would help to ensure maintenance of water quality. These measures may be modified somewhat as a result of conditions imposed by various regulatory agencies; therefore, the following should not be regarded as a comprehensive list of all possible mitigation measures that would be implemented.
  - Cover any graded areas with a protective mulch as soon as possible and reseed with adaptive plant species of value to wildlife.
  - Enforce strict rules to keep construction equipment and maintenance material out of swales, dry and flowing streambeds, and springs, particularly the spring at Carson Creek.
  - Collect and remove from the job site such pollutants as sanitary wastes and petroleum products.
  - Prepare a spill prevention and countermeasure plan prior to approval of a grading permit. The plan will be reviewed and approved by the El Dorado County Division of Environmental Health and Caltrans.
  - Use chemical toilets at all construction sites to prevent bacterial contamination of streams and springs.
  - Minimize surface disturbances to soil and vegetation as much as possible.
  - Dispose of excavated material appropriately, away from water sources.
  - Grade soil disposal and stockpile sites to minimize surface erosion.
  - Terrace and drain natural slopes to provide a sound foundation for embankments.
  - Revegetate graded areas to minimize erosion during wetter months of the year.
  - Install temporary sedimentation basins immediately downstream of the project site. Properly sized and designed sedimentation basins would substantially reduce discharges of sediment and other contaminants to downstream water bodies. Most soil erosion caused by construction generally occurs during construction and within the next two subsequent years following project completion. After 2 years, the basin or basins could be removed or continue their function of capturing sediment and pollutants.

**Special Mitigation Measures:** NA

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>10. Land Use and Planning. Would the project:</b>					
a. Physically divide an established community?	NA 1991 EIR, pp. 47 - 62	NA	NA	NA	NA
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?	1991 EIR, pp. 59 - 62	No	No	Yes	Mitigation included in the 1991 EIR
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	NA 1991 EIR, pp. 47 - 62	NA	NA	NA	NA

**Discussion:** The Land Use Section is located in Chapter 4 of the 1991 EIR. The project site is currently within the jurisdiction of El Dorado County and was located within the 1988 El Dorado Hills Specific Plan. The 1988 Specific Plan land use was designated for parcels north of U.S. 50 for High Density Residential with a small area of Multifamily Residential located along the proposed future extension of Silva Valley Parkway. The zoning districts for the parcels are Single Family Residential-One Acre Minimum, Exclusive Agriculture, Single Family Residential, and Estate-Residential 10-Acre Minimum. The 1991 EIR stated, “In the future, El Dorado County may change the current land use designations to become more compatible with the proposed interchange.” The 2004 updated County General Plan designations for lands surrounding the project site include Commercial, Medium and Low Density Residential, and Industrial uses. General Plan land uses anticipate construction of an interchange at this location, and, therefore, the proposed interchange project is compatible with these land use designations.

**Standard Mitigation Measures:** Impacts are less than significant and no mitigation measures are required.

**EIR Mitigation Measures:**

**Provide “Just Compensation” to Property Owners**

- El Dorado County would be responsible for providing “just compensation” to acquire the necessary property for either design, including right-of-way. The amount of “just compensation” would have to be determined on a parcel-by-parcel basis based on appraised land values.

**Landscape the Interchange Area**

- The design drawings for the interchange will include the basic landscaping required by Caltrans and additional landscaping to beautify the interchange.

**Implement Noise and Aesthetic Measures Presented in This EIR and Determine Compatible Land Use Designations for this Area**

December 8, 2010

- El Dorado County should select land use designations compatible with the proposed interchange for the area disapproved from the El Dorado Hills Specific Plan. The noise and aesthetic mitigation measures presented in this EIR should be implemented and should include selection of land use designations. If the land use designations differ from those analyzed in the EIR for the El Dorado Hills Specific Plan, then subsequent environmental review would be needed to effect a general plan amendment and rezoning.

**Construct the Alternate Access Road, Provide Driveways to the Residential Structures, and Ensure that Continues Access is Provided During Construction**

- El Dorado County should develop the alternative road shown on preliminary design drawings (8/88) of the ridge design to reach the properties along Tong Road. The road should be developed at no expense to the private property owners, maintained by the county, and constructed so that access to the homes is uninterrupted during construction. Individual driveways and any other necessary circulation improvement should be developed for each residence. Construction drawings of the driveways should be prepared in conjunction with property owners.

**Special Mitigation Measures:** Impacts are less than significant and no mitigation measures are required.

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>11. Mineral Resources. Would the Project:</b>					
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?	1991 EIR, pp. 75 – 77	No	No	No	NA
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?	NA 1991 EIR, pp. 74 – 77	NA	NA	NA	NA

December 8, 2010

**Discussion:** There would be no impact or adverse affect on mineral resources in the proposed project area. The 1991 EIR discussed mineral resources in the Geology Section.

Mineral resources in El Dorado County include metals such as gold, silver, copper, nickel, as well as nonmetallic mineral resources such as building stone, limestone, clay, sand, and gravel. (El Dorado County 2003). Although areas of important mineral resources generally occur in the western third of the County, the project site is not located in a Mineral Resources protection area as identified by either the County or State of California. Neither is the project located within an active extraction area. No active mining sites are located in vicinity of the proposed project. There are no mineral resources at the project site that could be actively mined by commercial operations. There are no mineral resources at the project site that could be actively mined by commercial operations, so there would be no impact.

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:** NA

**Special Mitigation Measures:** NA

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>12. Noise. Would the project result in:</b>					
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	1991 EIR, pp. 200 - 215	No	No	No	Mitigation included in the 1991 EIR
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	1991 EIR, pp. 200 - 215	No	No	No	Mitigation included in the 1991 EIR
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	1991 EIR, pp. 200 - 215	No	No	No	Mitigation included in the 1991 EIR
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	1991 EIR, pp. 200 - 215	NA	No	Yes	NA

**ADMINISTRATIVE DRAFT/ATTORNEY CLIENT PRIVILEGED**

December 8, 2010

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	NA 1991 EIR, pp. 200 - 215	NA	NA	NA	NA
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?	NA 1991 EIR, pp. 200 - 215	NA	NA	NA	NA

**Discussion:** Chapter 12 of the 1991 EIR discussed impacts from noise. Noise monitoring was performed for the project site to determine ambient noise levels. A detailed analysis of noise sources and noise abatement options is discussed in the 1991 EIR. Short-term noise measurement locations were selected to represent the primary noise sensitive land uses within the project area. The average noise level for the three locations measured was 66.5 dBA.

The primary source of noise in the project area is roadway traffic from Route 50 and local roads in the area including Silva Valley Parkway and White Rock Road. Sensitive noise receptors in the project area include the a portion of the Serrano residential development located along Silva Valley Parkway, the Tong Ranch, the Oak Meadow Elementary School, an adjacent church, and a Korean church.

Based on existing traffic volumes (1991 EIR), peak hour Leq noise levels in the vicinity of the project site range from 55.5 to 70.5 dBA. The dominate noise source in the vicinity of the project site is U.S. 50. These noise levels are considered incompatible with the few existing residential uses in the vicinity of the project site. Future year noise in the vicinity of the project site would result from a mix of new noise sources and existing noise sources. El Dorado Specific Plan limits noise no more than 60 dBA as incompatible with residential land uses for the vicinity of the project site. The County’s 2004 General Plan further establishes significance criteria for noise impacts as being an increase of more than 5 dBA Ldn caused by new transportation noise sources where existing or project noise levels are less than 60 dBA Ldn; or an increase of more than 3 dBA Ldn where existing or project noise levels range between 60 dBA and 65 dBA Ldn; or an increase of more than 1.5 dBA Ldn caused by new transportation noise sources where existing or project noise levels are greater than 65 dBA Ldn at the outdoor activity areas of residential uses.

The proposed project is only expected to raise noise levels 2.2-2.8 dBA in peak hours 350 feet from the centerline of U.S. 50. This change in noise levels would probably be noticeable to human ears. Construction noise is expected to be at levels of 80 dBA near the project boundaries. Blasting noise and vibration would accrue if the construction required blasting operations. Blasting noise from explosives would tend to be directed upward more than laterally, and would be partially muffled by surrounding rock.

Temporary construction-related noise is expected in proximity to existing residential land uses north and south of the project site. The contractor shall adhere to the County noise standards for activities associated with actual construction of a project.

The County’s standard specifications for construction projects restrict all construction activities between the hours of 7:00 a.m. and 7:00 p.m. on weekdays and 8:00 a.m. and 5:00 p.m. on weekends. Construction of the interchange and auxiliary lanes will require some nighttime construction to alleviate traffic congestion and safety hazards.

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:**

**Limit Construction Activities to Daytime Hours**

- The use of construction equipment powered by internal combustion engines, the use of impact equipment, or other construction activity that would result in disturbance of surrounding residential areas will be limited to the period between 7:00 a.m. and 7:00 p.m. (Monday through Friday only). This would limit any disturbance of residential areas to less sensitive periods of time.

**Advise Area Residents in Advance of Planned Blasting**

- All residents in the project vicinity (1,000 feet of the project site) will be notified in advance of any planned blasting operations. The notice will provide the phone number of an appropriate person to contact regarding questions or concerns. A short form and a stamped return envelope also will be provided so that appropriate follow-up contacts can be made with residents who believe their property contains vibration-sensitive structures.

**Design Blasting Operations to Avoid Damage to Any Vibration-Sensitive Structures**

- Blasting operations will be designed to minimize potential for vibration damage to adjacent properties. Follow-up inspections will be made in response to complaints generated from blasting operations. Blasting complaints will be resolved by the County of El Dorado Department of Transportation.

**Reduce Traffic Noise by Either Implementing Land Use Measures or Constructing Noise Barriers Along Both Sides of U.S. 50 and Silva Valley Parkway**

Traffic Noise in the vicinity of U.S. 50 and Silva Valley Parkway would be incompatible with noise-sensitive uses. This impact could be reduced to less-than-significant level by either implementing land use measures or constructing noise barriers. These two categories of mitigation measures are described below.

**Land Use Measures.** Section VIII, "Implementation," of the Noise Element of the El Dorado County General Plan (1979) recommends general ways to control or manage noise. Two of the way listed are to: "Plan future development to insure maximum separation between noise generators and noise sensitive uses," and "Provide for compatible use of land adjacent to heavily traveled highways." The following are specific mitigation measures that would be necessary to reduce the impacts of either design to a less-than-significant level.

- **Amend Land Use Designations.** Land uses on parcels with a project peak hour Leq noise level of more than 65 dBA, and shown in Figures 12-8 and 12-9 (1991 EIR), should be restricted to industrial or open space uses. Land uses on parcels with project noise level between 60 and 65 dBA, should be restricted to industrial or commercial uses. Land use on parcels with a project noise level of up to 60 dBA, should not be restricted by noise levels.
- **Use Additional Noise Insulation in Non-Residential Structures.** Nonresidential structures planned to be constructed near U.S. 50 or Silva Valley Parkway should be designed to incorporate additional noise insulation features. Such features should include: minimizing the extent of windows and sliding doors facing major roadways; extra wall and ceiling insulation; double glazing for windows and sliding doors; airtight seals between window or door frames and exterior walls; and use of permanently closed windows with a fresh air supply system or air conditioning.
- **Strictly Enforce California Department of Housing and Community Development Building Noise Insulation Standard.** State noise insulation standards (California Administrative Code Title 24, Section T25-28) sets a maximum interior noise level of 45 dB (CNEL). This noise level applies to exterior noise sources with windows closed. The state noise insulation standards currently apply to multifamily residential development and transient lodging (hotels and motels).
- Strict application of the state building noise insulation standards for multifamily residential uses and transient lodging would allow these uses to be built

December 8, 2010

in the area predicted to experience peak hour Leq noise levels in the range of 60-70 dBA.

- In addition to setting a maximum allowable interior noise level, the state standards require floor/ceiling assemblies to have a “sound transmission class” rate of at least 50, while entrance doors must have a sound transmission class rating of at least 30.
- The state noise insulation standards also require that an acoustical analysis be prepared under the supervision of a person experienced in the field of acoustical engineering. The report must show that the structure has been designed to limit intruding noise levels to 45 dB (CNEL). The report must show topographical relationship between noise sources and the structure site, identify noise sources and their characteristics, treat predicted noise spectra and the exterior of the proposed structure considering present and future land uses, explain the basis for the prediction (measured or obtained from published data), discuss noise attenuation measures to be applied, and offer an analysis of the noise insulation effectiveness of the proposed construction showing that the prescribed interior noise level requirements are met.
- Implement Residential Building Design Considerations. Because the area along U.S. 50 and Silva Valley Parkway would be exposed to evening and nighttime noise sources, interior noise levels at nearby residences may exceed desirable levels. Normal construction practices and materials for single family residences could result in interior noise levels as much as 20 dB below exterior levels (as long as windows and doors are closed). However, this reduction could be substantially degraded without proper attention to design and implementation of noise reduction features. An acoustical analysis should be prepared for all residential structures within approximately 1,000 feet of the centerline of U.S. 50 and within approximately 750 feet of the centerline of Silva Valley Parkway. The acoustical analysis should be able to ensure that interior noise levels do not exceed 45 dB Ldn.
- The following are some examples of building and site design features that could reduce interior noise levels:
  - Minimize the extent of windows and sliding doors facing the U.S. 50 and/or Silva Valley Parkway,
  - Install extra wall and ceiling insulation,
  - Use double glazing for windows and sliding doors,
  - Install airtight seals between window or door frames and exterior walls and
  - Shield bedrooms and other noise-sensitive areas of dwelling from exterior noise sources with other portions of the dwelling.
- **Implement Residential Site Design Considerations.** Residential areas within approximately 1,000 feet of the centerline of U.S. 50 and within approximately 750 feet of the centerline of Silva Valley Parkway should be planned and designed to minimize interior noise levels. Building design and orientation should minimize exposure of windows and sliding doors to vehicular traffic. Nonresidential buildings should be laid out to provide shielding of adjacent residential areas from traffic noise sources. Site planning for nonresidential uses in vicinity of the project site should also give consideration to placement and design of potential noise sources such as storage areas, loading docks, and parking lots in areas away from residential uses.

**Construct Noise Barriers Along U.S. 50 and Silva Valley Parkway.** VIII, “Implementation,” of the Noise Element of the El Dorado County General Plan (1979) recommends general ways to control or manage noise. One of the ways listed is to “Consider masonry barriers or fences where existing or proposed land use is adjacent to a highway, factory, etc.

If the land use mitigation measures described about are not implemented, construction of noise barriers will be necessary to reduce noise impacts of either design to less-than-significant level. The design drawings will include barriers along both sides of U.S. 50 and Silva Valley Parkway. The barriers will be 12 feet in height north of U.S. 50 and 10 feet in height south of U.S. 50, relative to the elevation of the nearest edge of pavement.

**ADMINISTRATIVE DRAFT/ATTORNEY CLIENT PRIVILEGED**

December 8, 2010

- Noise barriers are often the only effective way to protect outdoor activity areas (yards, parks, etc.) from traffic noise. Aesthetic factors and cost are other considerations that influence the desirability of noise barriers.
- The following are some additional aspects of the noise barriers:
  - The barriers can provide substantial noise reduction (10-15 dB) for areas within approximately 150 feet of the barrier. Noise reductions are generally less at greater distances from the barriers.
  - Noise barriers typically involve earth berms, masonry walls, or combinations of walls on top of berms. TO be effective, such noise barriers must block the line-of-sight between vehicles traffic and the area or building being protected.
  - Barriers must also be rather long to minimize noise transmissions around the end of the barrier. It is desirable; therefore, that the noise barrier extends along the entire length of U.S. 50 and Silva Valley Parkway where adjacent sensitive land uses would be located. It is also desirable that the noise barriers be as continuous as possible, running without breaks from end to end.
  - The type of surface on the noise barrier facing the roadway would be an important factor. An acoustically absorptive material can substantially reduce noise reflection.

**Special Mitigation Measures:** NA

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>13. Population and Housing. Would the Project:</b>					
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	NA	NA	NA	Yes	NA
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	NA	NA	NA	NA	NA
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	NA	NA	NA	NA	NA

December 8, 2010

**Discussion:** The 1991 EIR did not address population and housing issues. The project is not expected to induce a substantial population increase in the area. Conversely, the project is needed to accommodate growth that is projected in El Dorado Hills and the county, and have been designed in accordance with the latest regional transportation forecasts. The General Plan Update has resulted in changes to land use and transportation forecast when compared to those used to create the Ridge Design in 1991.

The proposed project would accommodate the vehicular circulate needs of existing and approved development in the El Dorado Hills area. The project would not displace any housing units or people and would not require the construction of replacement housing. The project would not divide an existing neighborhood and no changes to the social fabric are expected.

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:** NA

**Special Mitigation Measures:** NA

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>14. Public Services.</b>					
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 public services:	NA	No	No	No	NA
Fire protection?	NA	No	No	No	NA
Police protection?	NA	No	No	No	NA
Schools?	NA	No	No	No	NA
Parks?	NA	No	No	No	NA
Other public facilities?	NA	No	No	No	NA

December 8, 2010

**Discussion:** Public services were not addressed in the 1991 EIR (only public utilities as public services). Public services are not expected to be impacted by the proposed project. Fire and police protection services will continue to be provided and should improve (better access) once the project is constructed. Although an elementary school is located just north of the project, it will not be affected by the project. No parks or recreational facilities are located in the area. Bicycle/pedestrian paths and walkways will be provided and/or retained on Silva Valley Parkway.

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:** NA

**Special Mitigation Measures:** NA

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>15. Recreation.</b>					
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?	NA	NA	NA	NA	NA
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?	NA	NA	NA	NA	NA

**Discussion:** The 1991 EIR did not address recreation facilities. Bicycle and pedestrian facilities will be retained and/or improved as discussed below.

- The existing Silva Valley Road at the Clarksville Road Underpass will be remain a 2 lane local road with class 2 bike lanes on each side of the road and a concrete sidewalk on the west side.
- Class II bicycle facilities will be provided either as part of the new interchange, or as part of the existing undercrossing.

December 8, 2010

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:** NA

**Special Mitigation Measures:** NA

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>16. Transportation/Traffic. Would the project:</b>					
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	1991 EIR, pp. 129 - 171	NA	NA	Yes	NA
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	NA 1991 EIR, pp. 121 - 171	NA	NA	NA	NA
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?	NA 1991 EIR, pp. 121 - 171	NA	NA	NA	NA
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or	NA 1991 EIR, pp.	NA	NA	NA	NA

**ADMINISTRATIVE DRAFT/ATTORNEY CLIENT PRIVILEGED**

December 8, 2010

incompatible uses (e.g., farm equipment)?	121 - 171				
e. Result in inadequate emergency access?	NA 1991 EIR, pp. 121 - 171	NA	NA	NA	NA
g. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	NA 1991 EIR, pp. 121 - 171	NA	NA	NA	NA

**Discussion:** As discussed in Chapter 10 of the 1991 EIR, the proposed project is designed to ease congestion at multiple interchanges along U.S. 50. The proposed project was analyzed in the 1991 EIR using forecasted 2010 traffic levels. U.S. 50 was reanalyzed in 2007 (El Dorado Hills Traffic Volume Development Final Report) and the results indicate that the U.S. 50 freeway mainline west of El Dorado Hills interchange currently experiences unstable flow conditions (LOS F) in the eastbound direction during the PM peak hour. All other freeway mainline sections operate at LOS D or better. The results indicate that during AM peak hour conditions, all intersections currently operate at LOS D or better. Individual movements however operate deficiently at the U.S. 50 WB-Ramp/El Dorado Hills Blvd on the westbound and southbound approaches. The northbound left turn movement at the County intersection at White Rock and Latrobe also experiences excessive delay during the AM peak hour. The PM peak hour LOS results show all intersections operating at LOS D or better with the exception of individual movements at some intersections.

The Silva Valley Parkway Interchange will decrease the amount of vehicles at both the El Dorado Hills Blvd Interchange and Bass Lake Road Interchange. Forecasted traffic projects show the WB Ramps at the El Dorado Hills Blvd Interchange will operate at LOS D, with project, in 2030. Recent studies prepared for the County show in year 2030 a "No-Project" of 9,610 vehicles per hour (vph), and "With Project" of 5,921 vph. Therefore the project diverts 3,689 vehicles from the El Dorado Hills Blvd Interchange in the PM peak hour. A 2030 AM diversion analysis for the WB Bass Lake Interchange on-ramp has a "No-Project" of 1,208 vph, and "With Project" 1,114 vph. Therefore the project diverts 94 vehicles from the Bass Lake Interchange in the AM Peak hour. A 2030 PM diversion analysis for the WB Bass Lake Interchange on-ramp has a "No-Project" of 571 vph, and "With Project" 529 vph. Therefore the project diverts 42 vehicles from the Bass Lake Interchange in the PM Peak hour.

The proposed project is not within an airport land use plan or located within two miles of a public airport, public use airport or private airstrip. The nearest public airport is the Cameron Air Park Airport located approximately 4.5 miles east of the project site. Additionally, the proposed project would not conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities. The proposed project would not decrease the performance or safety of the aforementioned facilities. Silva Valley Interchange improves LOS at the Bass Lake Road Interchange. The Bass Lake Road Interchange improvements are included in the County CIP (County to collect fees).

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:**

- **Reconstruct the El Dorado Hills Boulevard Interchange.** This mitigation measure was identified in the El Dorado Hills Specific Plan EIR and will need to be treated as a separate improvement project needed when the interchange V/C/ ratio reaches 0.75 (Allington pers. Comm.).
  - Improve the Latrobe Road/U.S. 50 EB ramps intersection by adding a fourth northbound through lane to Latrobe Road.
  - Impacts at the EB and WB on-ramps cannot be reduced because the on-ramps cannot be widened.

December 8, 2010

- **Reconstruct the Brass Lake Road Interchange**
  - Widen the EB off-ramp to two lanes. This requires an auxiliary lane in advance of the off-ramp.
  - Add two southbound to eastbound left-turn lanes.
- **Widen U.S. 50.** TO accommodate the traffic volumes projected for either design at LOS D, under future year conditions, U.S. 50 would have to be eight lanes wide. This widening, of course, would be implemented in a phased manner as needed.

**Additional Mitigation Measures for the Ridge Design**

- **Improve the Silva Valley Parkway/U.S. 50 Interchange.** Add a second lane to the WB off-ramp. This requires an auxiliary lane in advance of the off-ramp.

**Special Mitigation Measures:** NA

Environmental Issue Area	Where Impact Was Analyzed in Prior 1991 EIR.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigations Implemented or Address Impacts.
<b>17. Utilities and Service Systems. Would the project:</b>					
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	NA 1991 EIR, pp. 115 - 120	NA	NA	NA	NA
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?	NA 1991 EIR, pp. 115 - 120	NA	NA	NA	NA
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?	1991 EIR, pp. 115 - 120	NA	NA	Yes	NA
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	NA 1991 EIR, pp. 115 - 120	NA	NA	NA	NA
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected	NA 1991 EIR, pp. 115 - 120	NA	NA	NA	NA

**ADMINISTRATIVE DRAFT/ATTORNEY CLIENT PRIVILEGED**

December 8, 2010

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?	NA 1991 EIR, pp. 115 - 120	NA	NA	NA	NA
g. Comply with federal, state, and local statutes and regulations related to solid waste?	NA 1991 EIR, pp. 115 - 120	NA	NA	NA	NA

**Discussion:** Chapter 9 of the previously prepared 1991 EIR described the public services and facilities of the project area, including Pacific Gas & Electric (PG&E) substation and associated facilities and El Dorado Irrigation District (EID) water and sewer lines. These descriptions are still accurate. Since 1991, EID has installed a water line and booster station on the north side of Highway 50 along State right of way. This water line is within an EID easement. Potential realignment of reclamation line and overhead high voltage electrical lines may be required. Changes to watershed descriptions may also require modification to storm drainage facilities.

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:**

- PG&E should prepare relocation plans for the 115-kV and 60-kV transmission and underbuilt distribution lines. These plans should be submitted to the El Dorado County Department of Transportation for site plan review prior to adoption of the relocation reroute and acquisition of right-of-way. El Dorado County would be required to convey or cause to be conveyed at no cost to PG and E all necessary land, entitlements, and permits in a form satisfactory to PG and E.
- The relocation route selection should not impact blue oak woodland, live oak riparian woodland, freshwater marshes, or the purple needledgrass grassland. If the route and pole placement result in the loss of acreage of any of these habitats, replacement planting would be required.
- The method of relocating the transmission lines should ensure the service to PG and E customers is not interrupted or degraded. This can be accomplished by erecting temporary lines (shoo-flies) around the interchange, reconnecting the shoo-flies to keep the lines and facilities served from the lines energized and operational, disconnecting the line sections to be relocated, removing and reinstalling the lines around the proposed interchange, reconnecting the relocated permanent lines, and then removing the shoo-flies.
- A simplified and less costly method of relocating the transmission lines would be to build and connect new, permanent line section around the proposed interchange and then remove the lines which are within the interchange right-of-way.
- Provide for electrical and gas line conduits in the interchange design. El Dorado County should provide for six-inch conduits for distribution of electricity in the proposed interchange to help accommodate electric circuit expansion across the highway. The specification should be prepared by PG and E and incorporated as par of the final construction drawings.

**Special Mitigation Measures:** NA

Environmental Issue Area	Where Impact	Do Proposed	Any New	Any New	Prior
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December 8, 2010

	Was Analyzed in Prior 1991 EIR.	Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Information Requiring New Analysis or Verification?	Environmental Documents Mitigations Implemented or Address Impacts.
<b>18. Mandatory Findings of Significance.</b>					
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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	NA	NA	NA	NA	NA
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)?	1991 EIR, p. 231	No	No	No	Mitigation included in the 1991 EIR
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	NA	NA	NA	NA	NA
<p>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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</p> <p>The proposed project involves the addition of an interchange at Silva Valley Parkway/U.S. 50. With the implementation of the 1991 EIR mitigation measures, development of the proposed project would not: 1) degrade the quality of the environment; 2) substantially reduce the habitat of fish or wildlife species; 3) cause a fish or wildlife population to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history.</p> <p>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.)</p>					

December 8, 2010

The potential impacts of the project are individually limited and are not cumulatively considerable. Implementation of mitigation measures recommended in this checklist would reduce potentially significant impacts that could become cumulatively considerable when viewed in connection with the effects of past, current and reasonably foreseeable future projects.

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

The proposed project would improve mainline operations and LOS at several interchanges and would not have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly.

**Standard Mitigation Measures:** NA

**EIR Mitigation Measures:** Refer to the mitigation measures included in the 1991 EIR and in this document.

**Special Mitigation Measures:** NA