EXECUTIVE SUMMARY

The City of Elk Grove, in cooperation with the County of Sacramento Department of Transportation, the City of Sacramento, the California Department of Transportation (Caltrans), and the Federal Highway Administration (FHWA), proposes to reconstruct the current State Route 99 (SR 99) Interchange at Sheldon Road. The proposed project would be constructed in the City of Elk Grove and the City of Sacramento, both of which are located within Sacramento County, California. The proposed project would begin at kilopost (KP) 23.0 and end at KP 25.0 (postmile [PM] 14.3/15.5). The proposed project would consist of replacing the existing Type L-6 hook ramp interchange and two-lane overcrossing structure at SR 99 and Sheldon Road with at Type L-9 modified partial cloverleaf interchange and a six-through-lane overcrossing.

The proposed project is a joint project by the City of Elk Grove and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentaion, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The City is the lead agency under CEQA and the FHWA is the lead agency under NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or some lower level of documentation, will be required. NEPA requires that an EIS is prepared when the proposed federal action (project) as a whole will "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. The context, referred to as the "affected environment", is the the geographic, social, and environmental contexts within which the project may have effects. Intensity is the severity of the potential impact, considered in context.

Another difference between NEPA and CEQA is that CEQA can utilize thresholds of significance to determinine the level of impact to a given resource while NEPA determines level of significance based on context and intensity. Under NEPA, all impacts are discussed regardless of any threshold amounts and include mitigation measures where reasonable.

CEQA, on the other hand, does require the City to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA.

As stated above, some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, it is quite often the case that a "lower level" document is prepared for NEPA. One of the most commonly seen joint document types is an Environmental Assessment/Environmental Impact Report (EA/EIR).

ALTERNATIVES

No Build Alternative

Under the "No Build Alternative" analysis, no improvements to the existing Sheldon Road/SR 99 interchange would occur. As such, the existing interchange, on- and off-ramps, and frontage roads would remain in their current state. The analysis of this alternative considers the environmental effects of not approving the proposed interchange improvement project.

Design Alternatives 2A and 3A

Two project alternatives have been developed and are identified as 2A and 3A. Both alternatives include the following overall elements:

- Element 1: Reconstruct the existing interchange on SR 99 at Sheldon Road; and
- Element 2: Realign East Stockton Boulevard.

Northeast Quadrant Design Options

Two options are proposed for the realignment of East Stockton Boulevard north of Sheldon in the northeast quadrant.

Option 1. Construct two roundabouts on East Stockton Boulevard in the northeast quadrant. A two-lane roundabout and a single lane roundabout would connect the realigned East Stockton Boulevard in the northeast quadrant to existing East Stockton Boulevard in the southeast quadrant. The two-lane roundabout would provide access to a future park and the single lane roundabout. (This northeast quadrant option is depicted in **Figure 1.4-1** of this document), or

Option 2. Realign East Stockton Boulevard to approximately 305 meters (1,000 feet) east of its existing location in the northeast and southeast quadrants. A conventional reversing-curve urban collector would be constructed connecting realigned East Stockton Boulevard in the northeast quadrant to the existing East Stockton Boulevard in the southeast quadrant (this northeast and southeast option is depicted in **Figure 1.4-2** of this document).

Design Alternative 2A

Alternative 2A is depicted on **Figure 1.4-1**. Alternative 2A proposes to construct a Type L-9 modified partial cloverleaf interchange with a nine-lane overcrossing, including six-through lanes and two left turn lanes for the west bound to southbound on-ramp diagonal, and a right turn lane for the eastbound to the northbound loop on-ramp. A 2.4m shoulder would be constructed in each direction, and a 1.5m sidewalk would be constructed in each direction on the bridge, with a 1.8m sidewalk constructed in each direction of the bridge. A 1.5m bicycle lane would be added on the eastbound direction on the bridge and adjacent to the right turn lanes and bridge intersections. The major roadway improvements would:

- Replace existing two-lane Sheldon Road bridge with a nine-lane structure that would provide three westbound through-lanes, two westbound left turn lanes to southbound SR 99, three eastbound through-lanes, and a right turn lane to northbound SR 99;

- Replace existing northbound hook off-ramp from SR 99 to Sheldon Road with a diagonal ramp in the southeast quadrant;

- Construct new northbound loop on-ramp from eastbound Sheldon Road to SR 99 in the southeast quadrant;

- Relocate the northbound diagonal on-ramp closer to the bridge and provide an access driveway between this ramp and the realigned East Stockton Boulevard in the northeast quadrant;

- Replace existing southbound hook on-ramp from Sheldon Road to SR 99 with a diagonal ramp in the southwest quadrant;

- Construct new southbound loop off-ramp from SR 99 to Sheldon Road in the southwest quadrant;

- Realign West Stockton Boulevard intersection with Sheldon Road to match the southbound ramp;

- Realign East Stockton Boulevard approximately 280 meters east of its current location; and

- Replace existing pump station.

Design Alternative 3A

Alternative 3A is depicted on **Figure 1.4-2**. Alternative 3A is the same as Alternative 2A on the east side of SR 99. On the west side of SR 99, it is similar to Alternative 2A with the following exception:

- The southbound loop off-ramp would not be constructed in the southwest quadrant. Instead, a southbound diagonal off-ramp would be reconstructed creating a tight-diamond configuration on the west side of the interchange.

Because of the planned diagonal off-ramp in the northwest quadrant, local access to businesses and residences would be revised. The following options would need to be constructed as part of the Sheldon Road/SR 99 Interchange Improvement project in order to provide access:

1. West Stockton Boulevard would be realigned to Lewis Stein Road, north of Sheldon Road; therefore, an access road would provide local access to Sheldon Road for the cemetery and businesses in the northwest quadrant. A driveway and tunnel would be provided for access to the San Joaquin Cemetery.

2. West Stockton Boulevard would be rerouted west of its current location, but would not provide a frontage road adjacent to the businesses in the northwest quadrant. A driveway and tunnel would be provided for access to the San Joaquin Cemetery. The road would be constructed from West Stockton Boulevard south to provide access to existing businesses, homes, and the cemetery ending in a cul-de-sac and looping west onto Lewis Stein Road.

Table ES-2, below, summarizes the potential impacts from both the 2A and 3A build alternatives, as well as the No Build Alternative.

Table ES-2
Summary of Potential Impacts and Proposed Mitigation Measures

Impact		Proposed Mitigation Measures	
2.1.3 COMMUNITY IMPACTS (SOCIAL, ECONOMIC) AND ENVIRONMENTAL JUSTICE			
Impact 2.1.3-1	Alternative 2A could remove two (2) RVs that may be outside of the RV park's boundary and within the City of Sacramento's right-of-way. All relocations would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title VI of the Civil Rights Act of 1964. Title VI prohibits discrimination based on race, color, religion, sex, disabilities, age, and national origin in providing services and benefits on federally assisted projects. If Alternative 2A were to remove the RV lots, the RV park manager would lose approximately $700 monthly revenue. Each lot is rented out for $300/week. Alternative 3A could remove two RVs that are located within the Laguna Village property boundary. All relocations would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title VI of the Civil Rights Act of 1964. Title VI prohibits discrimination based on race, color, religion, sex, disabilities, age, and national origin in providing services and benefits on federally assisted projects. If Alternative 3A were to remove the RV lots, the RV park manager would lose approximately $700 monthly revenue. Each lot is rented out for $300/week.	**MM 2.1.3-1**	Standard relocation measures are required by law and would be adhered to throughout relocation efforts. Relocation assistance payments and counseling would be provided to persons and businesses in accordance with the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act, as amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All eligible displacees would be entitled to moving expenses. All benefits and services would be provided equitably to all relocated residential and business without regard to race, color, religion, age, national origins, or disability as specified under Title VI of the Civil Rights Act of 1964.
2.1.4 UTILITIES AND EMERGENCY SERVICES			
Impact 2.1.4-1	Construction activities associated with the implementation of the project have the potential to obstruct or delay emergency vehicle access through the project area. If emergency vehicles cannot pass through the construction area, or if the construction activities result in a substantial delay in emergency vehicles passing through the construction area, residents and property in the area could	**MM 2.1.4-1a** **MM 2.1.4.1b**	During construction, one lane of the Sheldon Road/SR 99 overcrossing shall be kept open at all times to maintain emergency vehicle access through the area. At no time during the construction period will the entire width of the overcrossing be closed to emergency vehicle traffic. Prior to the start of construction, a Traffic Management Plan shall be developed that would reduce delays and

Impact	Proposed Mitigation Measures
be substantially impacted.	obstructions caused by construction detours to the greatest extent possible. The Plan developers shall coordinate with emergency service providers (i.e., fire and police) during plan development to insure that traffic control measures proposed in the plan would meet the needs of the service providers. These detours shall be provided to all emergency service entities prior to their implementation, to avoid impacts to emergency response times.
2.1.5 TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE SYSTEM	
Impact 2.1.5-1 Implementation of Alternative 2A or 3A may induce vehicle travel to the project study area under 2005 conditions. The amount of induced travel resulting from implementation of the project alternatives is uncertain.	**MM 2.1.5-1** Traffic conditions at the off-site study intersections will be monitored for peak hour volume and levels of service, and improvements necessary to maintain levels of service consistent with Policy CI-10 of the City of Elk Grove General Plan will be funded and constructed. It is important to note that the implementation of the mitigation measure is uncertain because the engineering and environmental feasibility studies for the improvements cannot be completed at this time. Further, the City's ability to fund and construct the improvements is uncertain.
Impact 2.1.5-2 Construction activities associated with the implementation of the project have the potential to obstruct or delay Regional Transit bus service and public school bus service access through the project area. If public/school transportation vehicles cannot pass through the construction area, or if the construction activities result in a substantial delay in public/school transportation vehicles passing through the construction area, residents in the area could be impacted.	**MM 2.1.5-2** Prior to the start of construction, a Traffic Management Plan (TMP) shall be developed in coordination with the City of Sacramento Traffic Engineer that would reduce delays and obstructions caused by construction activities to the greatest extent possible. The Plan developers shall coordinate with public and school transportation providers during plan development to insure that traffic control measures proposed in the plan would meet the needs of the service providers. Construction detours shall be provided to all public and school transportation providers who utilize the project area prior to the TMP's implementation, to avoid impacts to public and school transportation services. The TMP shall be submitted to the City of Elk Grove and City of Sacramento for review and approval prior to the start of construction.

Impact		Proposed Mitigation Measures	
Impact 2.1.5-3	Construction activities for the project may temporarily disrupt traffic in the project area. Temporary lane closures or traffic detours required to accommodate construction activities may disrupt regular traffic flow in and surrounding the project area, causing traffic congestion and/or queuing. Additionally, construction activities may result in queuing from the project area onto the freeway mainline of SR 99, particularly during peak AM and PM hours.	**MM 2.1.5-3**	The contractor shall complete a Traffic Control Plan that would reduce construction-related traffic congestion to the greatest extent feasible, and submit it to Caltrans for review and to the City of Elk Grove Public Works Department for approval, prior to beginning construction. The Caltrans Traffic Manual, Chapter 5, provides information on "Traffic Controls for Highway Construction and Maintenance Operations," and may be referenced during the development of the Traffic Control Plan. The Traffic Control Plan should consider the placement of electronic signs in advance of the Sheldon Road/SR 99 interchange off-ramps to provide advance notification of construction activities and showing the duration of the project's construction dates. Additionally, the sign may recommend that motorists use alternate interchanges, such as the Cosumnes River Boulevard-Calvine Road interchange and the Laguna Boulevard-Bond Road interchange during the Sheldon Road/SR 99 Interchange Improvement project construction period. To the extent possible, construction shall be limited during the AM and PM peak hours to avoid exacerbating congestion in the area.
Impact 2.1.5-4	Construction activities for the project would temporarily increase the amount of traffic on the project area roadways. The construction equipment and personnel to be used for the project are not known at this time, however, substantial construction traffic is expected during the construction period. Vehicular traffic associated with the project construction primarily consists of trucks used for the delivery and hauling of construction materials to and from the site, the hauling of dirt and demolition debris, the daily use of heavy earth-moving and other construction equipment, and the travel to and from the site by construction workers and inspectors. Additional traffic would be generated from construction workers commuting to the site and the transportation of construction vehicles and equipment. Some of the construction vehicles and equipment would be left on-site for the duration of their use,	**MM 2.1.5-4**	Construction traffic involving heavy haulers moving demolition material from the project site or moving fill to the project site shall operate outside of AM and PM peak traffic hours. This requirement shall be included in the construction contract.

Impact	Proposed Mitigation Measures
while other construction vehicles would make daily trips to the project site. The need for certain types and number of vehicles and equipment would depend on the phase of the project. Construction activities creating the most traffic would involve heavy haul trucks removing demolition material or importing fill.	
Impact 2.1.5-5 Construction activities associated with the intersection improvements could result in damage to project area roadways. Construction of the intersection improvements would involve extensive construction activities along Sheldon Road. These construction activities involve the use of heavy hauler trucks to export demolition material and import fill. The movement of these trucks could damage project area roadways.	**MM 2.1.5-5** Following the completion of construction activities, the construction contractor shall repair any project-related roadway damage in both the City of Elk Grove and the City of Sacramento, including new overlays on affected roadways. This requirement shall be included in the project construction contract.
2.1.6 CULTURAL RESOURCES	
Impact 2.1.6-1 Earth moving during construction could potentially disturb previously undiscovered cultural resources. Mitigation Measure 2.1.6-1 below shall be implemented to address this potential impact.	**MM 2.1.6-1** While there are no historic properties or historical resources in the project APE, the following measures will be implemented to reduce any potential impacts to undiscovered cultural resources: • If buried cultural materials are encountered during construction, work shall stop in that area until a qualified archaeologist can evaluate the nature and significance of the find(s). In addition, further investigations may be needed if the project changes to include areas not previously surveyed. • If human remains are discovered, State Health and Safety Code Section 7050.5 states that disturbances and activities shall cease in vicinity of the find and the County Coroner must be notified of the find immediately so that he/she may ascertain the origin of the remains. The provisions of 36 CFR 800.13 shall be followed to avoid, minimize, or mitigate adverse effects to the discovered remains.
2.2.2 WATER QUALITY AND STORMWATER RUN-OFF	
Impact 2.2.2-1 Soil disturbance associated with construction activities for	**MM 2.2.2-1** Prior to grading activities, the construction contractor shall

Impact		Proposed Mitigation Measures	
	the proposed project could cause accelerated soil erosion and sedimentation or the release of other pollutants to adjacent waterways. Construction activities would include grading and vegetation removal activities that would increase soil erosion rates in the areas proposed for development. This would result in the exposure of raw soil material to the natural elements (wind, rain, etc.). Grading operations could impact the surface runoff by increasing the amount of silt and debris carried by the stormwater runoff. This could be increased during the rainy season, which generally begins in October and ends in April.		prepare a Storm Water Pollution and Prevention Plan (SWPPP) for the project to be administered through all phases of grading and project construction. The SWPPP shall incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. The SWPPP shall address spill prevention and include a countermeasure plan describing measures to ensure proper collection and disposal of all pollutants handled or produced on the site during construction, including sanitary wastes, cement, and petroleum products. These measures shall be consistent with the City of Elk Grove's Drainage Manual and Land Grading and Erosion Control Ordinance may include (1) restricting grading to the dry season; (2) protecting all finished graded slopes from erosion using such techniques as erosion control matting and hydroseeding; (3) protecting downstream storm drainage inlets from sedimentation; (4) use of silt fencing and hay bales to retain sediment on the project site; and (5) any other suitable measures. The SWPPP shall be submitted to the Central Valley Regional Water Quality Control Board and to the City for review and approval.
Impact 2.2.2-2	Refueling and the parking of construction equipment and other vehicles onsite during construction could result in spills of oil, grease, or related pollutants that may eventually discharge into water resources in the project vicinity. Improper handling, storage, disposal of fuels and materials, or improper cleaning of machinery could cause water quality degradation.	Implementation of mitigation measure **MM 2.2.2-1** would reduce the project's impacts from accidental spills of oil, grease or other construction-related pollutants.	
2.2.3 GEOLOGICAL AND SOIL RESOURCES			
Impact 2.2.3-1	According to the USDA Soil Conservation Service, Soil Survey of Sacramento County, California, 1993, the project site is located in an area with a high shrink-swell potential. This could result in structure settlement and potential damage from differential settlement.	**MM 2.2.3-1**	Prior to approval of grading or improvement plans, whichever occurs first, the City of Elk Grove shall conduct a soil sample and laboratory test to determine the expansion potential and stability of the soil for development of the project site. If it is determined that the area contains expansive soils, one or more of the following mitigation

Impact	Proposed Mitigation Measures
	measures shall be employed to remove the expansive soils: • Expansive soils shall be excavated and replaced with non-expansive materials. The required depth of excavation shall be specified by a registered civil engineer based on actual soil conditions; • Expansive soils shall be treated in place by mixing them with lime. Lime-treatment alters the chemical composition of the expansive clay minerals such that the soil becomes non-expansive; or • Other engineering practices for mitigation of expansive soil conditions considered appropriate by Caltrans and the City of Elk Grove Public Works Department shall be implemented.
Impact 2.2.3-2 Construction of the project would involve grading, other earth movement, and the use of heavy machinery. There is the potential for erosion and sedimentation impacts resulting from the construction of the project.	**MM 2.2.3-2** Under the requirements of the Clean Water Act amendments of 1972, the project construction contractor would be required to file a notice of intent (NOI) under the State's NPDES General Construction Permit (CAS0002). The City would be required to adhere to conditions under the City's NPDES permit set forth by the Regional Water Quality Control Board (RWQCB) and also prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) to be administered throughout all phases of grading and project construction. The SWPPP would incorporate BMPs to ensure that potential water quality impacts during construction are minimized. BMPs that would be implemented during site grading and construction are included in the Water Quality Section of this EIR/EA. Implementation of this mitigation would reduce the potential for erosion and sedimentation impact to water resources.
2.2.4 HAZARDOUS WASTE/MATERIALS	
Impact 2.2.4-1 Development within the Sheldon Road/SR 99 interchange area may expose residents or construction workers to residues from past herbicide or pesticide applications.	**MM 2.2.4-1** During the plans, specifications, and estimates (PS&E) phase of project development, Phase II soil sampling for herbicide/pesticide contamination shall be conducted within areas of potential herbicide/pesticide contamination (former agricultural lands primarily in the northeast quadrant). If

Impact		Proposed Mitigation Measures	
			substances are detected at concentrations that could pose a health hazard and/or violate local, state, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the City, in consultation with the Sacramento County Environmental Management Department, deems the site remediated and clear for development.
Impact 2.2.4-2	The potential exists for possible asbestos containing materials (ACMs) from buildings, the existing overpass structure, and cementitious pipe currently located on the project site. Demolition of these structures could release asbestos into the atmosphere.	**MM 2.2.4-2a**	During the plans, specifications, and estimates (PS&E) phase of project development, a California Certified Asbestos Consultant shall conduct asbestos material sampling to identify ACMs. If substances are detected at concentrations that could pose a health hazard, physical barriers will be installed to prevent asbestos emissions upon removal of ACMs (i.e., tenting). An onsite asbestos removal professional trained in the Asbestos Hazard Emergency Response Act (AHERA) and meeting the U.S. Environmental Protection Agency Asbestos Abatement Consultant Certification requirements shall be retained to oversee proper asbestos waste maintenance and handling.
		MM 2.2.4-2b	Any identified asbestos containing building materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques and personal respiratory protection and decontamination. The process shall be designed and monitored by a California Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and submitted for review and approval by the appropriate regulatory agency (the Sacramento Metropolitan Air Pollution Management District).
		MM 2.2.4-2c	Demolition activities for the existing overpass structure shall be performed in compliance with National Emission Standards for Hazardous Air Pollutants (NESHAP), which requires permits from Sacramento Metropolitan Air Quality

Impact	Proposed Mitigation Measures
	District. This requirement shall be included in construction contracts.
Impact 2.2.4-3 During demolition, removal, construction, and grading activities, construction within the Sheldon Road/SR 99 interchange area could result in the disturbance of lead-based paint materials and expose persons to airborne lead material.	**MM 2.2.4-3a** During the plans, specifications, and estimates (PS&E) phase of project development, Phase II sampling shall be conducted within areas where lead could be present (paint on buildings to be demolished and yellow thermoplastic striping). If hazardous levels of lead materials are found, the materials shall be removed and disposed of by a licensed and certified lead removal contractor. The contractor shall take appropriate precautions to protect workers, the surrounding community, and to dispose of construction waste containing lead in accordance with local, state, and federal regulations. **MM 2.2.4-3b** During the plans, specifications, and estimates (PS&E) phase of project development, Phase II soil sampling shall be conducted within areas of potential aerially deposited lead contamination (along existing Caltrans right-of-way). If lead is detected in the soil at concentrations that could pose a health hazard and/or violate local, state, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the City, in consultation with the Sacramento County Environmental Management Department, deems the site remediated and clear for development. If signs of potential contamination (odors, discolored soil, etc.) are observed during construction activity in areas where Phase II sampling was not conducted, sampling and analysis and appropriate remediation shall be conducted. **MM 2.2.4-3c** Project construction activities shall be conducted in compliance with Caltrans Guidelines associated with aerially deposited lead. This requirement shall be included in construction contracts. **MM 2.2.4-3d** The Contractor shall prepare a project specific Lead Compliance Plan to prevent or minimize worker exposure to

Impact		Proposed Mitigation Measures	
			lead while handling removed yellow thermoplastic and yellow paint residue in accordance with Title 8, California Code of Regulations, Section 1532.1, "Lead," for specific Cal OSHA requirements when working with lead. Additionally, the Lead Compliance Plan shall contain the elements listed in Title 8, California Code of Regulations, Section 1532.1(e)(2)(B). Before submission to the engineer, an Industrial Hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene shall approve the Lead Compliance Plan. The Plan shall be submitted to the Engineer at least seven (7) days prior to beginning removal of yellow thermoplastic and yellow paint. The yellow thermoplastic striping shall be removed and disposed of in accordance with the Caltrans Standard Specifications, Sections 15-2.02B and 15-2.03 and Standard Special Provisions for removal of yellow traffic stripe and pavement markings.
Impact 2.2.4-4	Residual soil contamination associated with known releases from underground storage tanks (USTs) may remain on properties surrounding the interchange. During removal and construction activities, construction within the Sheldon Road/SR 99 interchange area could result in the disturbance of contaminated soils and expose persons to airborne material.	**MM 2.2.4-4a**	During the plans, specifications, and estimates (PS&E) phase of project development, Phase II soil sampling shall be conducted within areas where UST and waste oil releases have been known to occur. If contaminated soil is detected at concentrations that could pose a health hazard and/or violate local, state, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the City, in consultation with the Sacramento County Environmental Management Department, deems the site remediated and clear for development.
		MM 2.2.4-4b	If any unknown UST is encountered during excavation, additional assessment shall be required depending on the conditions encountered (e.g. odor or sheen apparent). Work shall stop until the completion of a Phase II Hazardous Waste Investigation is completed to determine the extent of the contamination and remediation. In the event that contamination is not found, the construction may proceed,

Impact		Proposed Mitigation Measures	
			but if contamination is found, a hazardous waste remediation plan shall be developed and implemented throughout construction. If substances are detected at concentrations that could pose a health hazard and/or violate local, state, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the City in consultation with the Sacramento County Environmental Management Department deems the site remediated and clear for development.
		MM 2.2.4-4c	The Environmental Management Department recommends that the Transportation Division develop a contingency plan to manage Underground Storage Tanks (USTs) if they are encountered during project implementation. The Hazardous Management District should be consulted if contaminated soils are encountered during construction. A contingency plan should be developed in the event that construction activities uncover unforeseen contamination that may hinder the progress of the project; and it is recommended that the Transportation Division consult with the County Counsel's Office regarding potential liabilities if contamination is encountered during construction activities.
Impact 2.2.4-5	If right-of-way is taken from any parcels containing domestic or irrigation wells, wells may be abandoned. Incorrectly abandoned wells have the potential to pose a water supply contamination hazard or a falling hazard.	**MM 2.2.4-5**	If right-of-way is obtained from any parcel containing water supply wells, the wells shall be properly abandoned under permit and observation by the Sacramento County Environmental Management Department, and all applicable state and local regulations. It is recommended that the City of Elk Grove closely inspect any farm property from which right-of-way may be acquired.
Impact 2.2.4-6	Soil piles of unknown origin have the potential to contain hazardous materials. The potential for human exposure to hazardous materials exists if the soil piles are disturbed during construction.	**MM 2.2.4-6a**	The City of Elk Grove shall identify the source of the fill dirt to verify if fill material originated from a contaminated site. During the plans, specifications, and estimates (PS&E) phase of project development, Phase II soil sampling of the soil piles shall be conducted to determine if they contain hazardous materials. In the event that the soil is not

Impact		Proposed Mitigation Measures	
			contaminated, the construction may proceed, but if the soil is contaminated, a hazardous waste remediation plan shall be developed and implemented throughout construction. If substances are detected at concentrations that could pose a health hazard and/or violate local, state, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the City in consultation with the Sacramento County Environmental Management Department deems the site remediated and clear for development.
		MM 2.2.4-6b	If contaminated soil is encountered elsewhere during excavation or grading, the construction contractors shall stop work and contact an environmental hazardous materials professional to conduct an onsite assessment. If the materials are determined to pose a risk to the public or construction workers, the construction contractor shall prepare and submit a remediation plan to the appropriate agency and comply with all federal, state, and local laws. Soil remediation methods could include excavation and onsite treatment, excavation and offsite treatment or disposal, and/or treatment without excavation. Construction plans shall be modified or postponed to ensure construction will not inhibit remediation activities and will not expose the public or construction workers to hazardous conditions.
2.2.5 AIR QUALITY			
Impact 2.2.5-1	The proposed project would generate air pollutants during construction. Trucks and construction equipment emit hydrocarbons, oxides of nitrogen, carbon monoxide, and particulates. Most pollution would consist of wind-blown dust generated by excavation, grading, hauling and various other activities. The impacts from the above activities would vary from day to day as construction progresses. The special provisions and standard specifications would include requirements to minimize or eliminate dust through the	**MM 2.2.5-1a**	The City of Elk Grove shall submit to the SMAQMD a construction emission/dust control plan and receive approval before groundbreaking. Construction of the proposed project is required to comply with all applicable SMAQMD rules and regulations, specifically Rule 403 regarding fugitive dust, Rule 442 regarding architectural coatings, and Rule 453 regarding asphalt paving. In accordance with the recommendations of the SMAQMD, the City of Elk Grove shall also implement the following

Impact	Proposed Mitigation Measures
application of BMPs and water or dust palliatives.	measures to reduce temporary construction emissions: **MM 2.2.5-1b** As recommended by the SMAQMD (2003), the City shall implement the following measures (where feasible) to reduce NOx and visible emissions from heavy-duty diesel equipment. (1) The City shall provide a plan for approval by the SMAQMD demonstrating that the heavy duty [> 50 horsepower (hp)], off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at the time of construction. The project representative shall submit a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 hp that will be used an aggregate of 40 or more hours during any portion of the project. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction operations occur. At least 48 hours before subject heavy-duty off-road equipment is used, the City shall provide the SMAQMD with the anticipated construction timeline including start date, and the name and phone number of the project manager and onsite foreman. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, particulate matter traps, engine profit technology, after-treatment products, and/or such options as become available. (2) The City shall ensure that emissions from off-road, diesel-powered equipment used on the project site do not exceed 40 percent opacity for more than three (3) minutes in any one (1) hour. Any equipment found to exceed 40 percent opacity (or Ringlemann 2.0) shall be repaired immediately, and the SMAQMD shall be notified of noncompliant equipment within 48 hours of

Impact	Proposed Mitigation Measures
	identification. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of visual survey results shall be submitted throughout the duration of the construction project, except that the monthly summary shall not be required for any 30-day period in which no construction operations occur. The monthly survey shall include the quantity and type of vehicles surveyed, as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. The above recommendations shall not supersede other SMAQMD or state rules and regulations. (3) The city's primary contractor shall be responsible for ensuring that all heavy-duty equipment is properly tuned and maintained, in accordance with manufacturers' specifications.
	MM 2.2.5-1c As recommended by the SMAQMD (1994b), the City shall reduce fugitive dust emissions, in compliance with Rule 403, by implementing the measures listed below. (1) All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be effectively stabilized of dust emissions using water, a chemical stabilizer or suppressant, or vegetative ground cover. (2) All onsite unpaved roads and offsite unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer or suppressant. (3) When materials are transported offsite, all material shall be covered, effectively wetted down to limit visible dust emissions, or maintained with at least 15 cm (six [6] inches) of freeboard space from the top of the container. (4) All operations shall limit or expeditiously remove the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours

Impact	Proposed Mitigation Measures
	when operations are occurring. (5) After material is added to or removed from the surfaces of outdoor storage piles, the storage piles shall be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer/suppressant. (6) Onsite vehicle speeds on unpaved roads shall be limited to 15 mph. (7) Wheel washers shall be installed for all trucks and equipment exiting unpaved areas or wheels shall be washed to remove accumulated dirt before such vehicles leave the site. (8) Sandbags or other erosion control measure shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than one (1) percent. (9) The extent of the areas simultaneously subject to excavation and grading shall be limited, wherever possible, to the minimum area feasible. **MM 2.2.5-1d** Prior to groundbreaking for the project, the City of Elk Grove shall pay, and obtain proof of payment of, the off-site air quality mitigation fee of $8,168.00 to SMAQMD.
2.2.6 NOISE	
Impact 2.2.6-1 The predicted future plus project traffic noise levels are expected to exceed the Caltrans Noise Abatement Criteria at 30 locations within the project study area.	**MM 2.2.6-1** Noise reducing pavement shall be applied to Sheldon Road, from Lewis Stein Road to the edge of the overcrossing bridge in the west, and from Power Inn Road to the edge of the overcrossing bridge in the east.

2.3.1 NATURAL COMMUNITIES	
Impact 2.3.1-1 Under both Build Alternatives (2A and 3A), the project would result in impacts to vernal pools and/or their supporting watersheds within the project area. The impacts would result in the complete loss of the vernal pools within the project area. Both of the options identified for East Stockton Boulevard would result in impacts to vernal pools.	**MM 2.3.1-1** In order to mitigate for impacts to vernal pool habitat, the project proponent shall mitigate according to USFWS guidelines. ~~Since the area of impact is less than 0.4 ha (1 acre), the compensatory~~ Compensatory mitigation will be conducted according to the USFWS programmatic Section 7 consultation as outlined in *Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office, California*, or as required by the Service in the Biological Opinion issued for the project, to result in a "no net loss" of vernal pool habitat. The mitigation identified in the Programmatic Formal Endangered Species Act Consultation is as follows: ▪ Preservation component. For every 0.4 hectares (1.0 acre) of habitat directly or indirectly affected, at least two vernal pool credits will be dedicated within a Service-approved ecosystem preservation bank, or, based on Service evaluation of site-specific conservation values, 1.2 hectares (3.0 acres) of vernal pool habitat may be preserved on the project site or on another non-bank site as approved by the Service. ▪ Creation component. For every 0.4 hectares (1.0 acre) of habitat directly affected, at least one vernal pool creation credit will be dedicated within a Service-approved habitat mitigation bank, or, based on Service evaluation of site-specific conservation values, 0.8 hectares (2.0 acres) of vernal pool habitat will be created and monitored on the project site or on another non-bank site as approved by the Service. Under both alternatives (2A and 3A) effective on-site creation of

			vernal pools is unlikely. Therefore, the project would purchase vernal pool credits from a Service-approved ecosystem preservation bank, such as Bryte Ranch Conservation Bank, to mitigate for impacts to vernal pools.
Impact 2.3.1-2	The realignment of East Stockton Boulevard under both build alternatives (Alternative 2A and 3A) would result in the need to construct a new roadway crossing over Whitehouse Creek. The construction of this crossing would require some fill of Whitehouse Creek. **Table 2.3-2** lists the impacts (i.e., hectares of Whitehouse Creek filled to accommodate crossing) for each alternative and associated options.	**MM 2.3.1-2a**	The East Stockton Boulevard crossing of Whitehouse Creek shall be constructed so as to minimize fill of Whitehouse Creek. Fill placed in the creek to construct the crossing shall be limited to the minimal amount of area necessary to construct the crossing. The crossing shall be designed to maintain the hydrologic and biologic integrity of Whitehouse Creek.
		MM 2.3.1-2b	In order to mitigate for permanent impacts (i.e., fill) to Whitehouse Creek, the project proponent will purchase in-kind mitigation credits at a 1:1 ratio at a U.S. Army Corps of Engineers-approved mitigation bank within the region.
Impact 2.3.1-3	Construction activities associated with the construction of the East Stockton Boulevard crossing of Whitehouse Creek could impact the creek. Potential construction-related impacts include damage to the creek bed and banks from the use of construction equipment to install the crossing. Construction within or near Whitehouse Creek could also result in impacts to the water quality in Whitehouse Creek, such as increased sedimentation due to construction activities, or pollution of the water in the creek from the use of construction equipment (i.e., petroleum spills, oil leaks, etc.).	**MM 2.3.1-3a**	Construction activities in or near the bed of the creek shall be minimized to the greatest extent possible, in order to minimize the area of damage caused by construction activity associated with the construction of the creek crossing. The following techniques shall be used to help avoid and minimize impacts to Whitehouse Creek during construction: 1. The construction area for creek work shall be established prior to the start of construction work in the creek. Only the minimum area required to complete construction shall be utilized and areas outside of the construction zone shall be protected. The creek construction area shall be marked with orange construction fencing to clearly demarcate the limits of the construction area, and to prevent construction equipment and workers from entering sensitive areas outside the construction area. 2. Work within the creek bed shall be limited to the dry season (approximately ~~April 15 to October 15~~ May 1 to October 1) to minimize impacts to bank erosion and water quality. Impacts to adjoining portions of Whitehouse Creek shall be minimized by implementing best management practices (BMPs), such as utilizing construction mats within the creek channel and implementing an erosion and sediment control plan that minimizes impacts to water

			quality within Whitehouse Creek. A biological monitor shall be present during construction activities in and near Whitehouse Creek.
		MM 2.3.1-3b	Whitehouse Creek shall be restored to its original topography to mitigate for temporary impacts (i.e. damage resulting from construction activities) and these areas shall be planted with wetland vegetation and subject to a CDFG, USFWS, and ACOE-approved re-vegetation and monitoring plan.
Impact 2.3.1-4	It is anticipated that most of the trees identified within the project area would be avoided, as they currently are associated with the residences within the project area. However, some protected trees occurring along the roadways could be affected, including six protected Valley oaks. Both Build Alternatives (Alternative 2A and 3A) would have similar impacts to protected trees within the project area.	**MM 2.3.1-4a**	The City shall retain, where feasible, all native trees larger than 15 cm (6") diameter at breast height (dbh) and all non-native trees larger than 48 cm (19") dbh. Where possible, the following measures shall be followed to protect trees identified for preservation: • For trees within the project area that are designated for preservation, a circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree; • Temporary protective fencing shall be installed at least 0.3 meters (1.0 foot) outside the driplines of the protected trees prior to initiating construction in order to avoid damage to the tree canopies and root systems; • Final grading plans shall show all protected trees, tree tag numbers, and trees' protected dripline areas, and shall show the location of the required protective temporary fencing; • Any protected trees on the site that require pruning shall be pruned by a certified arborist prior to the start of construction work in the area. All pruning shall be in accordance with American National Standards Institute (ANSI) A300 pruning standards and the International Society of Arboriculture (ISA) "Tree Pruning Guidelines"; • No signs, ropes, cables (except those which may be installed by a certified arborist to provide limb support) or any other items shall be attached to the trees. Small metallic numbering tags for the purpose of preparing

	tree reports and inventories shall be allowed; • No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of preserved oak trees; • No grading (grade cuts or fills) shall be allowed within the driplines of protected oak trees; • Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any oak tree; • No trenching shall be allowed within the dripline of oak trees. If it is absolutely necessary to install underground utilities within the dripline of an oak tree, the utility line shall be bored or jacked under the supervision of a certified arborist; • The construction of impervious surfaces within the driplines of oak trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system per City standard detail shall be installed under the supervision of a certified arborist; • No sprinkler or irrigation system shall be installed in such a manner that it sprays water or requires trenching within the driplines of oak trees. An above ground drip irrigation system is recommended; • During construction try to maintain the same watering frequency around trees that they are used to receiving; • Landscaping beneath oak trees may include non-plant materials such as bark mulch, wood chips, boulders, etc. The only plant species that shall be planted within the driplines of oak trees are those that are tolerant of the natural semi-arid environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants; • Make sure any weed control chemicals utilized prior to laying of new asphalt are not applied where they can leach into the dripline area of any tree; and • Clearing of weeds and debris from the protected

		dripline area shall be done by hand. The use of weed eaters and leaf blowers shall be permitted
	MM 2.3.1-4b	For all protected trees that require removal due to project implementation, a tree mitigation and monitoring plan shall be submitted to Caltrans and the City of Elk Grove for approval prior to the start of construction. The number of trees to be replanted will be based on the number of inches of protected trees to be removed. A mitigation planting plan or landscape plan shall be submitted to Caltrans and the City of Elk Grove and include the following mitigation measures: • A tree survey shall be conducted by an arborist certified by the International Society of Arboriculture (ISA) to enumerate and evaluate all trees on the site that meet the standards in the City Tree Ordinance and General Plan. • All tree locations shall be mapped onto the final approved plans and wherever possible, direct loss of protected trees shall be avoided. • For all protected trees that require removal due to project implementation, a tree mitigation and monitoring plan shall be submitted to the City of Elk Grove. The number of trees to be replanted will be based on the number of inches of protected trees to be removed. The mitigation planting plan shall include the number, location and species of the replacement trees; irrigation methods to help tree establishment and ensure survival; planting and maintenance schedules for a three-year establishment period or replanting as needed. • Trees that are not to be removed that are within 61 meters (200 feet) of grading activities shall be protectively fenced 1.5 meters (5.0 feet) beyond the dripline and root zone of each oak tree (as determined by an arborist). This fence, which is meant to prevent activities that result in soil compaction beneath the canopies or over the root zone, shall be maintained until all construction activities are completed. Grade changes shall be minimized to the extent feasible within

	or adjacent to the dripline of existing trees.
2.3.2 WETLANDS AND OTHER WATERS OF THE UNITED STATES	
Impact 2.3.2-1 Project implementation would result in impacts to jurisdictional waters of the U.S. Potential impacts to jurisdictional waters would be the same for both Alternative 2A and 3A. Foothill Associates conducted an initial survey of the project area in May of 2002 and September and October of 2003. A draft wetland delineation completed on June 22, 2004 determined that the project would impact ~~approximately 0.24 acres of~~ vernal pools and ~~directly impact 0.03 acre of~~ seasonal wetlands. Laguna Creek would not be impacted by the project.	**Impact 2.3.2-1** Project implementation would result in impacts to jurisdictional waters of the U.S. Potential impacts to jurisdictional waters would be the same for both Alternative 2A and 3A. Foothill Associates conducted an initial survey of the project area in May of 2002 and September and October of 2003. A draft wetland delineation completed on June 22, 2004 determined that the project would impact vernal pools, and seasonal wetlands. Laguna Creek would not be impacted by the project.
2.3.3 SPECIAL STATUS PLANT SPECIES	
Impact 2.3.3-1 Because dwarf downingia was not identified in the project area during focused botanical surveys, no impacts to this species are anticipated at this time. Though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools, therefore any effects to the vernal pools could affect this species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.
Impact 2.3.3-2 Because legenere was not identified in the project area during focused botanical surveys, no impacts to this species are anticipated at this time. Though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools; therefore any effects to the vernal pools could affect this species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.
Impact 2.3.3-3 Although Northern California black walnut trees are located near rural residences that would not be affected by the road improvements, the species is vulnerable to impacts resulting from the project construction, including activities that result in soil compaction or grading activities within the canopies and/or root zone. These construction activities could affect	Mitigation measures **MM 2.3.1-4a** and **MM 2.3.1.4b**, which outlined avoidance and minimization mitigation for native oaks in Section 2.3.1 Natural Communities, shall be applied to Northern California black walnut trees that may be impacted by construction of the proposed project.

	the trees.	
2.3.4 SPECIAL STATUS ANIMAL SPECIES OCCURRENCES		
Impact 2.3.4-1	The project would result in impacts to ~~Impacts to the~~ California linderiella habitat identified within the project area ~~are summarized in the table below~~. Impacts to vernal pool habitat would be the same for all of the alternatives and options identified. ~~Both of the options identified for East Stockton Boulevard would result in impacts to the larger vernal pool and to the smaller and long, linear vernal pool.~~ Impacts to the vernal pools would likely result in the pools no longer being viable habitat for listed invertebrate species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.
Impact 2.3.4-2	The project would result in impacts ~~Impacts~~ to the midvalley fairy shrimp habitat identified within the project area. ~~are summarized in the table Table 2.3.4-1.~~ (Because both midvalley fairy shrimp and California linderiella rely on vernal pools for their habitats, the impacts to the midvalley fairy shrimp and California linderiella would be the same.) Impacts to vernal pool habitat would be the same for all of the alternatives and options identified. ~~Both of the options identified for East Stockton Boulevard would result in impacts to the larger vernal pool and to the smaller and long, linear vernal pool.~~ Impacts to the vernal pools would likely result in the pools no longer being viable habitat for listed invertebrate species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.
Impact 2.3.4-3	Though not ideal wintering habitat for Ferruginous hawks, the agricultural/non-native grassland areas do provide some marginal foraging habitat, due to the presence of jackrabbits and field mice. A summary of the potential impacts (i.e. removal of potential foraging habitat) to Ferruginous hawk foraging habitat for each alternative is summarized in **Table 2.3.4-7**.	Because this species utilizes similar habitat as the Swainson's hawk for foraging, the mitigation measures **MM 2.3.5-7a** and **MM 2.3.5-7b** recommended for Swainson's hawk in Section 2.3.5 Threatened and Endangered Species would preserve potential winter foraging habitat for this species, as well.
Impact 2.3.4-4	Though no breeding habitat was identified within the project area for loggerhead shrike, the agricultural/non-native grassland areas do provide some foraging habitat. A summary of the potential impacts to loggerhead shrike foraging habitat for each alternative, which are the same as for the Ferruginous hawk, are summarized in **Table 2.3.4-7**.	Because this species utilizes similar habitat as the Swainson's hawk, the mitigation measures **MM 2.3.5-7a** and **MM 2.3.5-7b** recommended for Swainson's hawk in Section 2.3.5, Threatened and Endangered Species, would preserve potential winter foraging habitat for this species, as well.

Impact 2.3.4-5	While no impacts to Western burrowing owls are anticipated due to the lack of existing suitable habitat within the project area, burrowing owls are known to occur in the vicinity of the project area, and the potential exists for them to move into the project area and nest prior to construction.	**MM 2.3.4-5**	Though the site is currently not occupied by burrowing owls, preconstruction surveys for this species shall be conducted by a qualified biologist within the 30 days prior to construction to ensure that no burrowing owls have occupied the project area. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be resurveyed. If owls are subsequently identified within the project area, though are not likely to be directly or indirectly impacted by project construction, then the project proponent shall implement the following measures to minimize disturbance to this species: • A buffer area approximately 100 meters (328 feet) in radius will be established around occupied burrows. This radius will be identified by the placement of orange construction fencing. • If temporary ground disturbing activities are to occur within 50 to 100 meters (164 to 328 feet) of occupied burrows, then these areas will be restored to their original condition so as to maintain burrowing owl foraging habitat. • No disturbance activities should occur within 50 meters (164 feet) of occupied burrows.
Impact 2.3.4-6	While no impacts to raptors or other migratory bird species are anticipated due to the lack of existing suitable nesting habitat within the project area, raptors and migratory birds are known to occur in the vicinity of the project area, and the potential exists for raptors and nesting birds to enter the project site and nest before construction begins.	**MM 2.3.4-6**	If construction is proposed during the bird breeding season (February–August), a focused survey for raptors and other nesting birds shall be conducted within 30 days prior to the beginning of construction activities by a qualified biologist in order to identify active nests or roosts onsite. If active nests or roosts are found, no construction activities shall take place within 152 meters (500 feet) of the nest until the young have fledged. Trees containing nests, or burrows that must be removed as a result of project implementation shall be removed during the non-breeding season (late September to March). If no active nests are found during the focused survey, no further mitigation will be required.
Impact 2.3.4-7	While no impacts to bats are anticipated, the project area has a low potential for bats to occur in the abandoned	**MM 2.3.4-7**	A qualified biologist shall conduct a preconstruction survey for roosting bats within the abandoned outbuildings within

	outbuildings throughout the project area. Implementation of the project has the potential to disturb undiscovered maternity roost sites of special status bats located within abandoned outbuildings within the project area. Bat maternity season is usually from the beginning of April through the end of August.	the project area. If the survey shows evidence of the presence of bats in the structures, appropriate exclusionary measures shall be implemented to prevent the bats from establishing maternity roosts. If the survey shows evidence of active roosts, then development activities shall not occur within 152 meters (500 feet) of the nests until the young have fledged (usually after the end of August).
2.3.5 THREATENED AND ENDANGERED SPECIES		
Impact 2.3.5-1	Because Boggs Lake hedge-hyssop was not identified in the project area during focused botanical surveys, no impacts to this species are anticipated at this time. Though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools; therefore any impacts to the vernal pools would affect this species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.
Impact 2.3.5-2	Because Sacramento Orcutt grass was not identified in the project area during focused botanical surveys, no impacts to this species are anticipated at this time. Though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools; therefore any impacts to the vernal pools would affect this species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.
Impact 2.3.5-3	Because Slender Orcutt grass was not identified in the project area during focused botanical surveys, no impacts to this species are anticipated at this time. Though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools; therefore any impacts to the vernal pools would affect this species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.
Impact 2.3.5-4	~~Impacts~~ The project would result in impacts to the vernal pool fairy shrimp habitat identified within the project area	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential

	~~are summarized in **Table 2.3.5-3**~~. Impacts to vernal pool habitat would be the same for all the alternatives and options identified. ~~Both of the options identified for East Stockton Boulevard would result in impacts to the larger vernal pool and to the smaller and long, linear vernal pool.~~ Impacts to the vernal pools would likely result in the pools no longer being viable habitat for listed invertebrate species.	habitat for this species within the region.	
Impact 2.3.5-5	~~Impacts~~ The project would result in impacts to the vernal pool tadpole shrimp habitat identified within the project area ~~are summarized in **Table 2.3.5-4**~~. Impacts to vernal pool habitat would be the same for all the alternatives and options identified. ~~Both of the options identified for East Stockton Boulevard would result in impacts to the larger vernal pool and to the smaller and long, linear vernal pool.~~ Impacts to the vernal pools would likely result in the pools no longer being viable habitat for listed invertebrate species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.	
Impact 2.3.5-6	The proposed realignment of East Stockton Boulevard, under both build alternatives (Alternative 2A and 3A), would remove one (1) elderberry shrub located in the northeast quadrant of the project area. While surveys have not identified the presence of the VELB in this elderberry shrub, the removal of the shrub represents the removal of potential, although marginal quality, habitat for the VELB.	**MM 2.3.5-6a**	If the elderberry shrub cannot be avoided by the proposed project, then it will be transplanted to a conservation area approved by the USFWS. A qualified monitor will be on-site for the duration of the transplanting of the elderberry shrub to insure that no unauthorized take of VELB occurs. Transplantation should be conducted between November and mid-February. The conservation area receiving the transplant must be at least 548 square meters (1,800 square feet) in size. As many as five (5) additional elderberry plantings and up to five (5) associated native species plantings may also be planted within this area. The transplanted shrub shall receive supplemental watering through the first summer.
		MM 2.3.5-6b	In addition to the transplanting requirements, each elderberry stem measuring 2.5 cm (1.0 inch) or greater in diameter at ground level must be replaced in the conservation area with elderberry seedlings or cuttings at the ratios presented in **Table 2.3.5-6**. In addition, native species will be planted in the conservation area at the ratios presented in **Table 2.3.5-6**.
Impact 2.3.5-7	Though no nesting habitat was identified within the project area, the agricultural/non-native grassland areas do provide	**MM 2.3.5-7a**	If project construction is to occur between March 1 and September 15 (the Swainson's hawk nesting period), a

potential foraging habitat for Swainson's hawks. The implementation of the project could result in the loss of potential foraging habitat for Swainson's hawks. A summary of the potential impacts (i.e. removal of potential foraging habitat) to Swainson's hawk foraging habitat for each alternative is summarized in **Table 2.3.5-9**. Additionally, while there are no identified Swainson's hawk nests located within the project area, large trees are present in and near the project area that could be used as nesting sites. Though it is unlikely, it is possible that a Swainson's hawk could enter the project area and nest prior to the start of construction.		qualified biologist will conduct two surveys for actively nesting Swainson's hawks within the project area, as well as within a 1.6 km (1.0 mile) radius of the project area, prior to the start of construction. The surveys shall take place at least one week apart, with the second taking place two days prior to the start of construction. If active Swainson's hawk nests are found within 1.6 km (1.0 mile) radius of the construction site, the City of Elk Grove shall consult with the DF&G and the City shall retain a qualified biologist. Clearing and construction shall be postponed or halted within 76 meters (250 feet) of the nests (or another buffer acceptable by DF&G) until additional nesting attempts no longer occur. If a nest tree is found on the project site prior to construction and is proposed for removal, then appropriate permits from DF&G shall be obtained and mitigation implemented pursuant to DF&G guidelines. Complete avoidance of nesting Swainson's hawks will be assumed if project work occurs outside of the nesting time period (March 1 to September 15), or if no active nests are identified within 1.6 km (1.0 mile) of the project area. If project construction is to occur within 1.6 km (1.0 mile) of an active nest, a qualified biologist will monitor the nest for the possibility of abandonment. If an identified active nest becomes abandoned as a result of the implementation of the project, and if nestling(s) are still alive, the project proponent will fund the recovery and hacking of the nestling(s). If construction will occur over the course of more than a single breeding season, this mitigation shall be applied prior to the start of each breeding season for every year during which construction takes place.
	MM 2.3.5-7b	While the avoidance mitigation described above would reduce the potential impacts to Swainson's hawk nesting sites, implementation of the project would contribute to the loss of potential foraging habitat in the area, and compensatory mitigation is required to mitigate this loss. Mitigation for impacts to Swainson's hawk foraging habitat shall follow CDFG's 1994 *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California* (CDFG 1994). The City of Elk Grove will mitigate for the loss of

		Swainson's hawk foraging habitat by purchasing credits at a CDFG-approved mitigation bank at a replacement ratio of 1:1 for suitable foraging habitats. The City will further mitigate for impacts to Swainson's hawk habitat by purchasing credits at a CDFG-approved mitigation bank at a ratio of 0.5:1 specifically for the management of habitat for prey production. These mitigation lands will be managed and monitored in perpetuity by the trustees of the mitigation bank. The City will comply with any additional measures required by CDFG.
Impact 2.3.5-8	While the project area does not offer suitable nesting habitat for the white-tailed kite, the agricultural/non-native grassland areas within the project area provide potential foraging habitat for white-tailed kites. This potential foraging habitat could be impacted by implementation of the project. A summary of the potential impacts (i.e. removal of potential foraging habitat) to white-tailed kite foraging habitat for each alternative is summarized in **Table 2.3.5-9**.	Because the white-tailed kite utilizes the same foraging habitat as the Swainson's hawk, mitigation measure **MM 2.3.5-7a** and **MM 2.3.5-7b**, which requires compensatory mitigation for the loss of Swainson's hawk foraging habitat due to the project, would serve as mitigation for the loss of foraging habitat for the white-tailed kite, as well.
3.0 CUMMULATIVE IMPACTS CULTURAL RESOURCES		
Impact 3.0-1	Build-out of approved and planned projects (i.e., the East Franklin Specific Plan, Lent Ranch, South Pointe,) and associated infrastructure projects (e.g., improvement of the Grant Line Road Interchange) have the potential to inadvertently uncover previously unknown cultural resources. The inadvertent discovery of previously unknown cultural resources could result in a cumulative impact to cultural resources.	While there are no historic properties or historical resources in the project APE, the following measures will be implemented to reduce any potential impacts to undiscovered cultural resources: 1. If buried cultural materials are encountered during construction, work shall stop in that area until a qualified archaeologist can evaluate the nature and significance of the find(s). In addition, further investigations may be needed if the project changes to include areas not previously surveyed. 2. If human remains are discovered, State Health and Safety Code Section 7050.5 states that disturbances and activities shall cease in vicinity of the find and the County Coroner must be notified of the find immediately so that he/she may ascertain the origin of the remains. If the remains are determined to be Native American, then the stipulations in Public Resources Code Section 5097.98 shall be followed. Additionally, 36 CFR 800.13 shall be followed to avoid,

		minimize, or mitigate adverse effects to the discovered remains.
3.0 CUMMULATIVE IMPACTS GEOLOGICAL AND SOIL RESOURCES		
Impact 3.0-2	Build-out of approved and planned uses within the City have the potential to impact water quality as a result of site grading and construction phases of projects that involve earth movement and the use of heavy machinery. The effects of erosion and sediment deposition can be cumulative in nature within a watershed. Since the project would involve grading, other earth movement, and the use of heavy machinery, there is the potential for erosion and sedimentation impacts resulting from the construction of the project.	As discussed in the Geology and Soils Resources section of chapter 2, BMPs that would be implemented during site grading and construction are included in the Water Quality Section of this EIR/EA. Implementation of mitigation measure **MM 2.2.3-2** would reduce the potential for erosion and sedimentation impacts resulting from the implementation of the project.
3.0 CUMMULATIVE IMPACTS NOISE		
Impact 3.0-3	Traffic associated with the proposed project would contribute marginal noise level increases along all modeled road segments. Cumulatively, noise level increases associated with the project would be perceptible. The increased noise levels would be a potentially cumulative impact.	No feasible or reasonable mitigation measures have been identified to reduce noise impacts from this project. Therefore, the proposed project would contribute to cumulative noise increases in the area.
3.0 CUMMULATIVE IMPACTS VERNAL POOLS		
Impact 3.0-4	The vernal pool habitat that would be lost due to project development would not substantially contribute to the cumulative loss of vernal pool habitat in the region. The vernal pools are isolated from similar habitat by several kilometers, and if preserved in their current condition, would not contribute to region wide vernal pool conservation efforts. Typically, conservation efforts target larger intact and contiguous landscapes where existing resources can be preserved, restored, and/or created. Nevertheless the project would cause a loss of vernal pool habitat.	Implementation of mitigation measure **MM 2.3.1-1** would reduce the project's cumulative impacts to vernal pools by offering compensatory mitigation.
3.0 CUMMULATIVE IMPACTS SPECIAL STATUS PLANT & ANIMAL SPECIES		

Impact 3.0-5	Because the Boggs Lake hedge-hyssop was not identified in the project area during focused biological surveys, no cumulative effects to regional populations of Boggs Lake hedge-hyssop are anticipated as a result of the implementation of any of the proposed project alternatives. Though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools; therefore any impacts to the vernal pools would affect this species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1,** would preserve and create potential habitat for this species within the region.
Impact 3.0-6	Because the Sacramento orcutt grass was not identified in the project area during focused botanical surveys, no cumulative effects to regional populations are anticipated as a result of the implementation of any of the proposed project alternatives. However, though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools; therefore any impacts to the vernal pools would affect this species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1,** would preserve and create potential habitat for this species within the region.
Impact 3.0-7	Because the slender orcutt grass was not identified in the project area during focused botanical surveys, no cumulative effects to regional populations are anticipated as a result of the implementation of any of the proposed project alternatives. However, though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools; therefore any impacts to the vernal pools would affect this species.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1,** would preserve and create potential habitat for this species within the region.
Impact 3.0-8	The vernal pool habitat that would be lost due to project development would not adversely contribute to the cumulative loss of vernal pool habitat in the region. The vernal pools are isolated from similar habitat by several kilometers and if preserved in their current condition would not contribute to region wide vernal pool	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1,** would preserve and create potential habitat for this species within the region.

	conservation efforts. Typically, conservation efforts target larger intact and contiguous landscapes where existing resources can be preserved, restored, and/or created.	
Impact 3.0-9	The vernal pool habitat that would be lost due to project development would not adversely contribute to the cumulative loss of vernal pool habitat in the region. The vernal pools are isolated from similar habitat by several kilometers and if preserved in their current condition would not contribute to region wide vernal pool conservation efforts. Typically, conservation efforts target larger intact and contiguous landscapes where existing resources can be preserved, restored, and/or created.	Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1,** would preserve and create potential habitat for this species within the region.
Impact 3.0-10	The area of southern Sacramento County has grown significantly within the recent past, often resulting in the loss of agricultural lands that have been historically utilized as foraging habitat by Swainson's hawks. This development has also resulted in encroachment upon sites that have historically been used as nesting habitat. Though the project area is fragmented and is partially surrounded by urban development, it is in close enough proximity to an active nest and has likely been historically utilized for foraging that the loss of this habitat could contribute to the cumulative effects to this species in Sacramento County.	The mitigation measures outlined above in **MM 2.3.5-12a** and **MM 2.3.5-12b** would serve to adequately reduce the project's cumulative impacts to the Swainson's hawk.

AREAS OF KNOWN CONTROVERSY

City of Elk Grove is the CEQA lead agency for the proposed project. In accordance with Section 10587 of CEQA Guidelines, City of Elk Grove prepared a Recirculated Draft EIR/EA for the Sheldon Road/SR 99 Interchange Project that was circulated for public review on January 20, 2005. The Recirculated Draft EIR/EA included analysis of probable effects on the environment of the implementation of the project. Written comments that expressed concerns and areas of controversy received on the Recirculated Draft EIR/EA were considered in the preparation of the Final EIR/EA. Comments received are included in Section 3.0 (Response to Comments of the Final EIR/EA.

The following is a summary of areas of controversy known at the time of the release of the Final EIR/EA:

- **Noise:** Noise issues of controversy include exposure to traffic noise associated with operation of the improved interchange. Noise issues are evaluated in Section 2.2.6 Noise of the Recirculated Draft EIR/EA and in Section 4.0 Errata/Edits to the Recirculated Draft EIR/EA in the Final EIR/EA.

- **Roadway Alignment and Access to Properties**: Implementation of either Alternative 2A or Alternative 3A would result in changes in access to properties from the roadway at several parcels throughout the project area.

OTHER CURRENT PROJECTS

Below is a list of major development proposals currently under consideration by the City of Elk Grove, the City of Sacramento, Sacramento County, and state agencies in the same geographical area. **Appendix G** of the Recirculated Draft EIR/EA offers a comprehensive listing of development projects in the area.

1. Laguna Ridge Specific Plan;
2. South Point;
3. College Square PUD;
4. Lent Ranch Marketplace SPA;
5. East Franklin Specific Plan; and
6. Calvine Special Planning Area.

HISTORY OF THE PROJECT

The Sheldon Road/SR 99 Interchange Improvement project was originally proposed by Sacramento County, the original lead agency and decision-making body for this project. The City of Elk Grove is now the lead agency for the proposed project for the purposes of the California Environmental Quality Act (CEQA), and FHWA is the lead agency for the purposes of the National Enviornmental Policy Act (NEPA). **Table ES-3** provides a summary of major events of the project from its initiation to current status.

TABLE ES-3
PROJECT HISTORY

- **1989**: Evaluation of environmental impacts was initiated.
- **January 18, 1990**: Caltrans prepared a Preliminary Environmental Analysis Report (PEAR).
- **March 1998**: Caltrans initiated the preparation of the Project Study Report (PSR) for the project.
- **July 2000**: City of Elk Grove incorporated, resulting in the City of Elk Grove gaining jurisdiction over the project and becoming the lead agency and decision-making body for this project.
- **March 2002**: City of Elk Grove prepared and circulated a draft EIR; Caltrans approved the PSR.
- **2003**: Sheldon Road/SR 99 Interchange Improvement Project was evaluated under NEPA as an Environmental Assessment (EA).
- **December 2003**: Alternatives 1A, 2A, and 3A were developed from former build alternatives 1, 2, and 3 developed in the PSR completed by Caltrans.
- **January 2005**: Recirculated Draft EIR/EA circulated for public review.

The majority of the proposed Sheldon Road/SR 99 Interchange Improvement project would be locally funded and would be subject to a cooperative agreement between the State of California, the City of Elk Grove, and the City of Sacramento. It is anticipated that federal funding would also be utilized for a portion of the project. As such, the project is being analyzed under NEPA. **Table ES-4** provides a list of regulatory agencies with jurisdiction over the proposed project and the areas of jurisdiction relative to the project site.

Table ES-4
Interested Parties and Project Site Jurisdiction

Party	Project Site Jurisdiction
City of Elk Grove	CEQA Lead Agency, Northeast, Southeast, and Southwest Quadrants
City of Sacramento	CEQA Responsible Agency, Northwest Quadrant
State of California	CEQA Responsible Agency, Interchange
Federal Highway Administration	NEPA Lead Agency
United States Army Corps of Engineers	Waters of the United States
United States Fish and Wildlife Service	Federal Endangered Species Act
California Department of Fish and Game	California Endangered Species Act, Streambed Alteration Agreement
Regional Water Quality Control Board	Section 401 of the Clean Water Act, Water Quality