

Summary

S.1 Introduction

This joint draft Environmental Assessment/Environmental Impact Report (EA/EIR) has been prepared to satisfy both the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 et seq.) and the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) Although the document satisfies the legal requirements of both NEPA and CEQA, the “project” addressed under the state act is more expansive than the “action” addressed under the federal act.

The CEQA proposed “project” is a 2-phased project, whereas the NEPA proposed “action” equates only with the first phase of that project. For CEQA purposes, Phase 1 of the project is an interim 4-lane tight diamond interchange, and the preferred Phase 2 (or the Ultimate Phase) configuration is a single point diamond interchange (SPDI). El Dorado County (County), at present, will consider taking action only on Phase 1 as part of this project since Phase 1, alone, is included in the approved 2025 Metropolitan Transportation Plan (MTP) and the 2003/05 Metropolitan Transportation Improvement Program (MTIP), as well as the Missouri Flat Area Master Circulation and Funding Plan (MC&FP), critical mass approval associated with the MC&FP, and MC&FP Community Facilities District financing plan.

The NEPA proposed action, in contrast, is only a 4-lane tight diamond interchange; this configuration is the same as the Phase 1 project for CEQA. The Federal Highway Administration (FHWA) will consider taking action only on the 4-lane tight diamond interchange, since it is included in the approved 2025 MTP and the 2003/05 MTIP. The CEQA proposed project and NEPA proposed action are further described below.

S.2 Summary of the Proposed Project under CEQA

The proposed project under CEQA entails construction of an interim 4-lane tight diamond interchange configuration during Phase 1 to replace the existing interchange. The interim 4-lane tight diamond interchange configuration is the minimum design that solves existing traffic operational deficiencies until approximately 2015.

An ultimate single point diamond interchange (SPDI) configuration would be constructed in Phase 2 (the Ultimate Phase), but only if warranted, based on future level of service (LOS), prior to the LOS reaching an unacceptable level. The need for and timing of implementing Phase 2 will depend on the land use map that the County ultimately adopts as part of its new General Plan, which was only in a draft stage at the time this draft EA/EIR was released for public review. If the County adopts a new General Plan that provides for more growth than currently allowed by the 1999 Writ of Mandate from *El Dorado County Taxpayers for Quality Growth et al. v. County of El Dorado* (Sacramento County Superior Court No. 96CS01290), which currently governs land use decisions in the County pending completion of the new General Plan, the County would have the option of pursuing Phase 2 (SPDI) as a separate project. To do so, the following would have to occur:

- funding is available to build Phase 2,
- the Phase 2 improvements are added by Board of Supervisors action to the list of MC&FP-funded improvements; and
- the Phase 2 improvements are added to a future MTP and MTIP if federal funds are to be used to build these improvements.

Despite the fact that the County is not presently in a position to commit to any Phase 2 design or construction, Phase 2 is nevertheless analyzed in this report, as part of the total “project” since it is Caltrans’ policy that State facilities be designed for a minimum 20-year design life, assuming 20-year population projections issued by regional entities such as the Sacramento Area Council of Governments (SACOG). Because neither Phase 1 nor Phase 2 can proceed without cooperation and approval from Caltrans, the County is required to follow Caltrans’ procedures and policies in planning for the project. Since Phase 1 is designed to provide an adequate level of service for approximately 10 years, Phase 1, standing by itself, would not meet Caltrans’ 20-year design requirement. The SPDI is referred to as the “preferred alternative” in this report since it is operationally superior to the other Phase 2 configurations evaluated, and the County Board of Supervisors originally selected it as the preferred alternative in December 1996. In short, the “project” considered for CEQA purposes has been formulated not only based on County planning considerations, but also on Caltrans’ procedures and policies that, as a practical matter, the County is constrained to follow, regardless of the present state of the County General Plan and land use decision-making.

The proposed project will improve the U.S. Highway 50 (U.S. 50)/Missouri Flat Road interchange. The County has identified the following objectives that the project is intended to achieve:

- increase the U.S. 50/Missouri Flat Road interchange capacity to solve existing operational deficiencies and to accommodate traffic associated with planned growth in the County;
- address safety problems associated with the interchange; and
- meet Caltrans' planning and design requirements for those portions of the project within State right of way.

The proposed project involves the following:

- reconstructing the Missouri Flat Road interchange on U.S. 50, including:
 - providing 2 lanes on the interchange ramps;
 - providing 2 left-turn lanes and 2 right-turn lanes for each of the off-ramps at the ramp intersection; and
 - providing auxiliary lanes in both directions on U.S. 50 from the Missouri Flat Road interchange to the Forni Road/Placerville Drive interchange;
- realigning and reconstructing Missouri Flat Road, including:
 - replacing the Missouri Flat Road overcrossing structure;
 - providing dual left-turn lanes leading to the highway on-ramps; and
 - providing 2 northbound and 2 southbound through lanes between 235 meters (771 feet) north of Prospector's Plaza Drive to 150 meters (357 feet) south of Perks Court;
- seismically retrofitting and widening the eastbound and westbound Weber Creek bridges, including:
 - providing additional strength to the structural steel bracing members;
 - providing additional concrete at the tops of the piers to accommodate anticipated seismic movement; and
 - widening the eastbound Weber Creek bridge to provide for 1 new auxiliary lane and 1 new ramp lane that would merge with the auxiliary lane just east of the bridge, and widening the westbound Weber Creek bridge to provide 2 new auxiliary lanes. Both bridges would also be widened to provide standard shoulders and standard bridge railing. Additional footings and columns would be constructed to support the new auxiliary lanes;
- reconstructing Perks Court;

- reconstructing Mother Lode Drive to provide 2 left-turn lanes and 1 right-turn lane at the intersection of Mother Lode Drive and Missouri Flat Road;
- reconstructing the Missouri Flat Road/Prospector's Plaza Drive intersection; and
- reconstructing the Mother Lode Drive/Greenleaf Drive intersection.

Caltrans approved a Project Study Report in June 2001 that evaluates upgrades to the adjacent U.S. 50 interchange to the east of the Missouri Flat Road interchange, the U.S. 50/Forni Road/Placerville Drive interchange. This Project Study Report also evaluates improvements to the Ray Lawyer Drive overcrossing. The environmental document for this project is expected to be completed in summer 2004. The County and the City of Placerville are coordinating their efforts on the Missouri Flat Road and Forni Road/Placerville Drive interchanges to ensure that the 2 interchanges work compatibly as a transportation system.

The EIR portion of this joint document is not only a project EIR for the interchange, but it is also a supplemental EIR for the MC&FP with an extremely narrow focus. The MC&FP was the subject of a program EIR certified in December 1998 (EDAW 1998). In approving the MC&FP, the Board adopted Findings of Fact that, among other things, committed the County to numerous mitigation measures detailed in the program EIR. Because one of these measures – labeled 4.8-1 in the program EIR and Board Findings of Fact (see Appendix J, page 6 of 14) – has proven to be unnecessary and unworkable in one small respect, the County proposes to modify that measure as part of the proposed approvals for this interchange project. (See CEQA Guidelines, Section 15163.)

S.2.1 Summary of Alternatives to the Proposed Project under CEQA

Three alternatives to the preferred alternative are evaluated in Chapter 5—the No-Project Alternative (2025)(no-build alternative), the 6-Lane Tight Diamond, and the 4-Lane Tight Diamond (2025) Alternatives (additional viable build alternatives). Two other interchange designs were also considered for Phase 1: the modified L-9 and the modified L-8. However, both other Phase 1 designs were rejected. The modified L-9 was rejected since it had more extensive right-of-way impacts than the 4-lane tight diamond interchange in the northeast and southwest quadrants of the interchange. The modified L-8 interchange was also rejected since it had traffic safety and operations concerns.

Under the No-Project Alternative (2025), no interchange and intersection improvements would be constructed along Missouri Flat Road. The No-Project Alternative (2025) would maintain the existing U.S. 50/Missouri Flat Road interchange configuration. Improvements to the Prospector's Plaza Drive, Mother Lode Drive, Perks Court, and U.S. 50 ramp intersections along Missouri Flat Road would not occur. The Weber Creek bridges would also not be brought into compliance with current seismic thresholds as part of this project, or be upgraded by Caltrans as a stand-alone seismic retrofit and shoulder/railing upgrade project.

The 6-Lane Tight Diamond Alternative represents an alternative design to the preferred alternative that would require slightly less land acquisition during the Ultimate Phase than the SPDI. Some would also consider the 6-Lane Tight Diamond configuration as less visually unique since it would consist of similar facility features (relatively straight ramp configurations) to the existing interchange, whereas the SPDI would reconfigure the ramps in a circular/arching manner (EDAW 1998).

Phase 1 of the 6-Lane Tight Diamond Alternative would be identical to the preferred alternative, entailing construction of an interim 4-lane tight diamond interchange configuration. The Ultimate Phase under this alternative, if constructed, would entail upgrading the Phase 1 tight diamond configuration to accommodate future traffic volumes while maintaining the tight diamond interchange configuration with 2 ramp intersections. Missouri Flat Road within the project limits would also be widened to 6 lanes. Improvements to the Weber Creek bridges during Phase 1 and the Ultimate Phase would be identical to the preferred alternative.

The 4-Lane Tight Diamond Alternative (2025) entails building the Phase 1 improvements for the interchange and Weber Creek bridges as the ultimate project. This alternative would be constructed in 1 phase, rather than in 2 phases. The proposed improvements would be identical to the Phase 1 interim improvements described above. The 4-Lane Tight Diamond Alternative (2025) is analyzed in this joint document to support the range of land use alternatives being evaluated as part of the County's new general plan process. If the County adopts a new general plan that provides for no more growth than allowed by the Writ of Mandate, then the 4-Lane Tight Diamond Alternative (2025) would be adequate to accommodate traffic associated with planned growth in the County through 2025 (see section 1.2, "Project Background" for a description of the Writ of Mandate and Appendix H for a copy of the Writ of Mandate).

S.3 Summary of the Proposed Action under NEPA

The proposed action (also referred to in Chapter 3 as the 4-lane tight diamond interchange) under NEPA would entail construction of a 4-lane tight diamond interchange to replace the existing interchange; this configuration would be the same as the Phase 1 project (and the 4-Lane Tight Diamond Alternative [2025]) for CEQA. FHWA will act only on the 4-lane tight diamond interchange since it can only certify an environmental document on a project that is included in the approved 2025 MTP and 2003/05 MTIP.

FHWA has identified the following objectives that the action is intended to achieve:

- increase the U.S. 50/Missouri Flat Road interchange capacity to solve existing operational deficiencies and to accommodate traffic associated with planned growth in the County to 2015 consistent with the Writ of Mandate;
- address safety problems associated with the interchange;

The proposed action involves the following:

- reconstructing the Missouri Flat Road interchange on U.S. 50, including:
 - providing a single lane westbound on-ramp and a single lane eastbound on-ramp;
 - providing a 2-lane westbound off-ramp that is widened to 4 lanes at the ramp intersection to provide 2 left-turn lanes and 2 right-turn lanes; and
 - providing an auxiliary lane in both directions on U.S. 50 from the Missouri Flat Road interchange to the Forni Road/Placerville Drive interchange;
- realigning and reconstructing Missouri Flat Road, including:
 - replacing the Missouri Flat Road overcrossing structure;
 - providing dual left-turn lanes leading to the highway on-ramps; and
 - providing 2 northbound and 2 southbound through lanes between 235 meters (771 feet) north of Prospector's Plaza Drive to 150 meters (357 feet) south of Perks Court;
- seismically retrofitting and widening the eastbound and westbound Weber Creek bridges, including:
 - providing additional strength to the structural steel bracing members;
 - providing additional concrete at the tops of the piers to accommodate anticipated seismic movement; and
 - widening the eastbound and westbound Weber Creek bridge to provide for 1 new auxiliary lane on each bridge. Both bridges would also be widened to

provide standard shoulders and standard bridge railing. Additional footings and columns would be constructed to support the new auxiliary lanes;

- reconstructing Perks Court;
- reconstructing Mother Lode Drive to provide 2 left-turn lanes and 1 right-turn lane at the intersection of Mother Lode Drive and Missouri Flat Road;
- reconstructing the Missouri Flat Road/Prospector's Plaza Drive intersection; and
- reconstructing the Mother Lode Drive/Greenleaf Drive intersection.

S.3.1 Summary of Alternatives to the Proposed Action under NEPA

The No-Action Alternative is analyzed in this joint document. Two additional 2015 build alternatives, the modified L-9 interchange and the modified L-8 interchange, were also evaluated, but were determined to be technically infeasible. The modified L-9 interchange was rejected since it would result in more extensive right-of-way impacts as compared to the 4-lane tight diamond interchange. The modified L-8 interchange was also rejected since it had inferior traffic operations as compared to the 4-lane tight diamond interchange and would result in traffic safety concerns. See Section 2.1 of this report for more details.

S.4 Summary of Major Potential Impacts of the Proposed Project/Action and of the Alternatives

Table S.4-1 presents the potentially significant adverse environmental impacts associated with the preferred alternative under CEQA and identifies proposed mitigation measures that would reduce significant impacts to less than significant levels. Table S.4-2 compares the impacts of the preferred alternative to the No-Project Alternative, the 6-Lane Tight Diamond Alternative, and the 4-Lane Tight Diamond Alternative (2025). These tables also present the premitigation and postmitigation significance conclusions associated with the preferred alternative (Table S.4-1) and the other alternatives (Table S.4-2) under CEQA.

Table S.4-3 presents the adverse environmental impacts associated with the 4-lane tight diamond interchange under NEPA and identifies proposed mitigation measures that would reduce adverse impacts. Table S.4-4 compares the impacts of the 4-lane tight diamond interchange to the No-Action Alternative.

S.5 Known Areas of Controversy

The following major issues have been raised during the project’s public involvement process and are potential areas of controversy:

- assumptions regarding planned growth that the proposed project is designed to accommodate;
- accommodation of bicyclists and pedestrians with the SPDI design; and
- potential growth-inducing impacts of the project.

S.6 Short-term Uses Versus Long-Term Productivity

The NEPA regulations promulgated by the Council of Environmental Quality (CEQ) require that the environmental document include a discussion of the “relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity...” (40 CFR 1502.16.) CEQA’s requirement for a discussion of short-term uses versus long-term productivity was repealed in 1994.

The uses of man’s environment are described in the cumulative impact analysis contained in Chapter 4 of this joint document. Other long-term commitments not seriously affecting the state of the environment include the use of resources necessary to construct the project, such as gravel, steel, and sand.

The long-term benefits of the proposed action include improved traffic safety and operations, increased interchange capacity to accommodate planned growth, and seismically retrofitting the Weber Creek bridges.

S.7 Irreversible and Irretrievable Commitment of Resources

The CEQ NEPA regulations require that the environmental document include a discussion of “any irreversible and irretrievable commitments of resources which would be involved in the proposed action” (40 CFR 1502.16). CEQA does not require such a discussion unless the project involves the adoption or amendment of a plan, policy, or ordinance; determinations by a local agency formation commission; or an environmental impact statement (CEQA Guidelines 15127).

Table S.4-1. CEQA Impacts and Mitigation Measures Associated with the SPDI (Preferred Alternative)

CEQA Impacts	CEQA Mitigation Measures	CEQA Level of Significance before Mitigation	CEQA Level of Significance after Mitigation
3.1/5.1 Land Use, Planning, and Growth			
LU1: Permanent right-of-way acquisitions from 19 parcels	None proposed	LTS	LTS
LU2: Compatible with planned land Uses	None proposed	LTS	LTS
LU3: No impact on community cohesion	None proposed	LTS	LTS
LU4: Consistent with local and regional plans and policies	None proposed	LTS	LTS
LU5: Potential displacement of 35 parking spaces at Prospector's Plaza	None proposed	LTS	LTS
LU6: Construction-related impacts	LU6a: Implement a traffic management plan	Economic impact	Economic impact
3.2/5.2 Community Impacts and Environmental Justice			
C1: Minor population impacts	None proposed	LTS	LTS
C2: Minor local tax revenue impacts	None proposed	Economic impact	Economic impact
C3: Minor local and roadside business impacts	None proposed	LTS	LTS
C4: Minor beneficial construction-related economic impacts	None proposed	Economic impact	Economic impact
3.3/5.3 Relocation			
R1: Displacement of 3 (Perks Court cul-de-sac option) or 2 (Perks Court realignment option) residences	R1a: Compensate displaced land uses in conformance with the Uniform Relocation Assistance and Real Property Acquisition Polices Act ^a	LTS	LTS
R2: Displacement of 3 commercial businesses	R1a: Compensate displaced land uses in conformance with the Uniform Relocation Assistance and Real Property Acquisition Polices Act ^a	S	LTS
3.4/5.4 Traffic and Transportation/Pedestrian and Bicycle Facilities			
T1: 2005—Acceptable LOS at ramp junctions	None proposed	LTS	LTS
T2: 2005—Unacceptable weaving conditions at the U.S. 50/Missouri Flat Road eastbound on-ramp until the U.S. 50/Forni Road/Placerville Drive interchange is improved	T2a: Provide temporary ramp metering for the U.S. 50 eastbound on-ramp from Missouri Flat Road	S	LTS
T3: 2005—Acceptable LOS at all arterial intersections	None proposed	LTS	LTS
T4: Elimination of 20 park-and-ride lot spaces	T4a: Establish another park-and-ride lot	S	LTS
T5: Provision of bicycle lane and continuous sidewalks along Missouri Flat Road	None proposed	LTS	LTS

Table S.4-1. Continued

CEQA Impacts	CEQA Mitigation Measures	CEQA Level of Significance before Mitigation	CEQA Level of Significance after Mitigation
T6: Construction-related safety concerns	LU6a: Implement a traffic management plan	S	LTS
T7: 2015—Acceptable LOS and weaving conditions at all ramp junctions	None proposed	LTS	LTS
T8: 2015—Acceptable LOS at all arterial intersections	None proposed	LTS	LTS
T9: 2025—Acceptable LOS and weaving conditions at all ramp junctions	None proposed	LTS	LTS
T10: 2025—Acceptable LOS at all arterial intersections	None proposed	LTS	LTS
3.5/5.5 Air Quality			
AQ1: 2005—No exceedances of CO concentrations are expected since LOS is expected to be C or better at all intersections and links	None proposed	LTS	LTS
AQ2: Temporary increase in construction-related ROG and NO _x emissions during grading and construction activities	AQ2a: Mitigate construction equipment exhaust emissions consistent with EDCAPCD requirements	S	LTS
AQ3: Temporary increase in construction-related PM10 emissions during grading and construction activities	AQ3a: Comply with Rule 403 of the South Coast AQMD, as required by the EDCAPCD	S	LTS
AQ4: 2015 and 2025—No exceedances of CO standards	None proposed	LTS	LTS
3.6/5.6 Noise			
N1: Exposure of noise-sensitive land uses to construction noise	N1a: Employ noise-reduction construction measures	S	LTS
N2: Exposure of noise-sensitive land uses to noise from blasting	N2a: Employ measures to limit blast noise	S	LTS
N3 : 2015—2 dB increase over future no-project levels and 4 dB increase over existing noise levels	None proposed	LTS	LTS
N4: 2025—2 dB increase over future no-project design year levels and 4dB increase over existing noise levels	None proposed	LTS	LTS
3.7/5.7 Hydrology, Water Quality, and Floodplains			
WQ1: Changes in local stormwater drainage	None proposed	LTS	LTS
WQ2: Flooding and hydraulic changes	None proposed	LTS	LTS
WQ3: Temporary construction water quality impacts	WQ3a: Obtain authorization under the NPDES permit for permanent post-construction Best Management Practices	S	LTS

Table S.4-1. Continued

CEQA Impacts	CEQA Mitigation Measures	CEQA Level of Significance before Mitigation	CEQA Level of Significance after Mitigation
<p>WQ4: Water quality impacts from changes in stormwater drainage</p>	<p>WQ4a: Obtain authorization under the NPDES stormwater permit for construction-related Best Management Practices</p> <p>BR3f: Limit in-water construction activities to the summer low- or no-flow period</p> <p>BR3g: Ensure that turbidity increases do not exceed central valley regional water quality control board standards</p> <p>BR3h: Develop and implement a toxic materials control and spill-response plan</p> <p>BR3i: Store hazardous materials at an approved storage facility</p>	<p>S</p>	<p>LTS</p>
<p>3.8/5.8 Wildlife and Botanical Resources, Threatened and Endangered Species, and Wetlands and Waters of the United States</p>			
<p>BR1: Permanent loss of approximately 0.0016 hectare (0.004 acre) of Weber Creek and approximately 0.0032 hectare (0.008 acre) of oak woodland</p>	<p>BR3a: Conduct a biological resources education program for construction crews and enforce construction restrictions</p> <p>BR3b: Retain a biologist to monitor construction activities within Weber Creek</p> <p>BR3c: Install construction barrier fencing around the construction area to protect sensitive biological resources that will be avoided</p> <p>BR3d: Conduct preconstruction surveys and minimize mortality to CRLF and foothill yellow-legged frog</p> <p>BR3e: Conduct preconstruction surveys to minimize mortality to northwestern pond turtles</p> <p>BR3f: Limit in-water construction activities to the summer low- or no-flow period</p> <p>BR3g: Ensure that turbidity increases do not exceed Central Valley Regional Water Quality Control Board standards</p> <p>BR3h: Develop and implement a toxic materials control and spill-response plan</p> <p>BR3i: Store hazardous materials at an approved storage facility</p> <p>BR3j: Minimize long-term impacts on woody riparian vegetation and associated habitat</p>	<p>S</p>	<p>LTS</p>

Table S.4-1. Continued

CEQA Impacts	CEQA Mitigation Measures	CEQA Level of Significance before Mitigation	CEQA Level of Significance after Mitigation
<p>BR2: Potential loss of 0.019 hectare (0.045 acre) of jurisdictional seasonal wetlands and of 0.0055 hectare (0.01 acre) of non-jurisdictional seasonal wetlands</p>	<p>BR3c: Install construction barrier fencing around the construction area to protect sensitive biological resources that will be avoided</p> <p>BR3f: Limit in-water construction activities to the summer low- or no-flow period</p> <p>BR3g: Ensure that turbidity increases do not exceed Central Valley Regional Water Quality Control Board standards</p> <p>BR3h: Develop and implement a Toxic Materials Control and Spill-Response Plan</p> <p>BR3i: Store hazardous materials at an approved storage facility</p>	<p>S</p>	<p>LTS</p>
<p>BR3: Disturbance to approximately 0.1 hectare (0.25 acre) of Weber Creek and approximately 0.29 hectare (0.71 acre) of white alder riparian forest vegetation</p>	<p>BR3a: Conduct a biological resources education program for construction crews and enforce construction restrictions</p> <p>BR3b: Retain a biologist to monitor construction activities within Weber Creek</p> <p>BR3c: Install construction barrier fencing around the construction area to protect sensitive biological resources that will be avoided</p> <p>BR3d: Conduct preconstruction surveys and minimize mortality to CRLF and foothill yellow-legged frog</p> <p>BR3e: Conduct preconstruction surveys to minimize mortality to northwestern pond turtles</p> <p>BR3f: Limit in-water construction activities to the summer low- or no-flow period</p> <p>BR3g: Ensure that turbidity increases do not exceed Central Valley Regional Water Quality Control Board standards</p> <p>BR3h: Develop and implement a toxic materials control and spill-response plan</p> <p>BR3i: Store hazardous materials at an approved storage facility</p> <p>BR3j: Minimize long-term impacts on woody riparian vegetation and associated habitat</p> <p>BR3k: Enhance riparian habitat by developing and implementing a riparian restoration plan</p>	<p>S</p>	<p>LTS</p>

Table S.4-1. Continued

CEQA Impacts	CEQA Mitigation Measures	CEQA Level of Significance before Mitigation	CEQA Level of Significance after Mitigation
BR4: Potential disturbance to 0.044 hectare (0.12 acre) of jurisdictional seasonal wetlands/drainages	BR3c: Install construction barrier fencing around the construction area to protect sensitive biological resources that will be avoided BR3f: Limit in-water construction activities to the summer low- or no-flow period BR3g: Ensure that turbidity increases do not exceed Central Valley Regional Water Quality Control Board standards BR3h: Develop and implement a toxic materials control and spill-response plan BR3i: Store hazardous materials at an approved storage facility	S	LTS
BR5: Removal of and disturbance to up to 8–12 hectares (20–30 acres) of blue oak woodland and an undetermined number of native trees	BR3c: Install construction barrier fencing around the construction area to protect sensitive biological resources that will be avoided BR5a: Minimize and compensate for impacts on blue oak woodlands and individual native oak trees by replanting oaks	S	LTS
BR6: No impact on special-status plant species	None proposed	LTS	LTS
BR7: Introduction of new noxious weeds or spread of existing noxious weed species	BR7a: Avoid the introduction of new noxious weeds or the spread of existing noxious weeds	S	LTS
BR8: Potential disturbance of 1 blue elderberry shrub—valley elderberry longhorn beetle habitat	BR8a: Avoid disturbance of valley elderberry longhorn beetle habitat BR3a: Conduct a biological resources education program for construction crews and enforce construction restrictions BR3b: Retain a biologist to monitor construction activities	LTS	LTS
BR9: Potential disturbance of non-special-status nesting raptors	None proposed	LTS	LTS
BR10: Loss of raptor foraging habitat	None proposed	LTS	LTS
BR11: Disturbance of nesting swallows	BR11a: Avoid construction during swallow nesting season or remove empty nests and prevent new nesting	S	LTS
BR12: Direct mortality and short-term disturbance of common slow-moving and ground-dwelling animals	None proposed	LTS	LTS
BR13: Short-term disturbance and removal of habitat occupied by common wildlife species	None proposed	LTS	LTS
BR14: Consistent with El Dorado County policies	None proposed	LTS	LTS

Table S.4-1. Continued

CEQA Impacts	CEQA Mitigation Measures	CEQA Level of Significance before Mitigation	CEQA Level of Significance after Mitigation
3.9/5.9 Historic and Archeological Preservation			
CR1: Potential damage to currently unknown cultural resources	CR1a: Implement procedures for the unanticipated discovery of cultural resources	S	LTS
3.10/5.10 Hazardous Materials and Earth Resources			
ER1: Change in topography from grading activities during construction	ER1a: Approve grading design plans consistent with County and Caltrans grading permit requirements	S	LTS
ER2: Potential for unstable slope conditions from grading activities during construction of embankments and cut slopes	ER2a: Approve final design plans consistent with County and Caltrans' standard earthwork specifications	S	S
ER3: Potential for structural damage from development in seismic risk zone 3	ER3a: Approve final design plans that are consistent with Caltrans and Uniform Building Code standards for seismic safety	S	LTS
ER4: Potential for structural damage from development on materials subject to liquefaction	ER3a: Approve final design plans that are consistent with Caltrans and Uniform Building Code standards for seismic safety	S	LTS
ER5: Potential for increased short-term and long-term erosion rates from grading activities	ER1a: Approve grading design plans consistent with County and Caltrans grading permit requirements	S	LTS
ER6: Potential for exposure of people to asbestos	ER6a: If unknown deposits of asbestos are found during construction, comply with El Dorado County's Asbestos Ordinance	S	LTS
ER7: Potential for exposure of previously unknown hazardous wastes to construction workers and/or nearby land uses	ER7a: Implement recommendations related to hazardous materials contained in the project ISA	S	LTS
3.11/5.11 Visual			
VR1: Changes in regional visual character	None proposed	LTS	LTS
VR2: Changes in views of landscape units 1 and 2	None proposed	LTS	LTS
VR3: Changes in views of landscape units 3, 4, 5, and 6	None proposed	LTS	LTS
VR4: Imperceptible changes in light and glare with 11 new fixtures at the interchange, 8 of which would be pedestrian-level on the overcrossing	None proposed	LTS	LTS
VR5: Short-term visual changes in views from construction activities	VR5a: Implement measures to minimize short-term light and glare on nearby residents from nighttime construction	S	LTS
3.12/5.12 Utilities/Emergency Services			
U1: No long-term disruption of services	None proposed	LTS	LTS

Table S.4-1. Continued

CEQA Impacts	CEQA Mitigation Measures	CEQA Level of Significance before Mitigation	CEQA Level of Significance after Mitigation
U2: Potential for temporary interference to law enforcement, fire protection, and emergency medical services	LU6a: Implement a traffic management plan	S	LTS
U3: Generation of construction-related solid waste	None proposed	LTS	LTS

Notes: CEQA significance conclusions:

LTS = less than significant.

S = significant.

SU = significant and unavoidable.

Economic impact = under CEQA, the social and economic effects of projects are not normally considered impacts on the environment; therefore, no criteria have been developed to evaluate the significance of purely social or economic effects of the project.

^a This mitigation measure is not required under CEQA because this impact is less than significant without mitigation. However, this measures meets the legal obligation of a law other than CEQA.

Table S.4-2. Comparison of CEQA Impacts Associated with the Preferred Alternative and Alternatives to the Proposed Project

Preferred Alternative (SPDI), Phase 1 and Ultimate Phase (2025)	Comparison of Alternatives to the Proposed Project		
	No-Project Alternative, 2025	6-Lane Tight Diamond, Phase 1 and Ultimate Phase (2025)	4-Lane Tight Diamond, 2025
3.1/5.1 Land Use, Planning, and Growth			
LU1: Permanent right-of-way acquisitions from 19 parcels (LTS/LTS)	No impact	Same number of parcels affected but less land acquired during the Ultimate Phase of construction than SPDI (LTS/LTS)	Same number of parcels affected but no land acquired during a second phase of construction (LTS/LTS)
LU2: Compatible with planned land uses (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
LU3: No impact on community cohesion (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
LU4: Consistent with local and regional plans and policies (LTS/LTS)	LU7: Inconsistent with adopted plans (S/LTS)	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
LU5: Potential displacement of 35 parking spaces at Prospector's Plaza (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
LU6: Construction-related impacts (economic impact)	No impact	Similar to SPDI, but 1 parcel would experience a greater temporary take during Ultimate Phase; construction-related disruptions on 2 parcels under Perks Court realignment option may be less since no driveway realignment required (economic impact)	Impacts would be of a similar nature to the preferred alternative, but less severe in magnitude because only 1 phase (not 2 phases) of construction would occur; no temporary easements needed during a second phase of construction (economic impact)
3.2/5.2 Community Impacts and Environmental Justice			
C1: Minor population impacts (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
C2: Minor local tax revenue impacts (economic impact)	No impact	Same as preferred alternative (economic impact)	Same as preferred alternative (economic impact)
C3: Minor local and roadside business impacts (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
C4: Minor beneficial construction-related economic impacts (economic impact)	No impact	Same as preferred alternative (economic impact)	Beneficial short-term employment and economic impacts would not occur during a second phase of construction (economic impact)

Table S.4-2. Continued

Preferred Alternative (SPDI), Phase 1 and Ultimate Phase (2025)	Comparison of Alternatives to the Proposed Project		
	No-Project Alternative, 2025	6-Lane Tight Diamond, Phase 1 and Ultimate Phase (2025)	4-Lane Tight Diamond, 2025
3.3/5.3 Relocation			
R1: Displacement of 3 (Perks Court cul-de-sac option) or 2 (Perks Court realignment option) residences (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
R2: Displacement of 3 commercial businesses (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
3.4/5.4 Traffic and Transportation/Pedestrian and Bicycle Facilities			
T1: 2005—Acceptable LOS at ramp junctions (LTS/LTS)	T11: 2005—Acceptable LOS at ramp junctions (LTS/LTS)	Same as preferred alternative in 2005 (LTS/LTS)	Same as preferred alternative in 2005 (LTS/LTS)
T2: 2005—Unacceptable weaving conditions at the U.S. 50/Missouri Flat Road eastbound on-ramp until the U.S. 50/Forni Road/Placerville Drive interchange is improved (S/LTS)	T12: 2005—Unacceptable weaving conditions at the U.S. 50/Missouri Flat Road eastbound and U.S. 50/Forni Road/Placerville Drive westbound on-ramp until the U.S. 50/Forni Road/Placerville Drive interchange is improved (S/LTS)	Same as preferred alternative in 2005 (S/LTS)	Same as preferred alternative in 2005 (S/LTS)
T3: 2005—Acceptable LOS at all arterial intersections (LTS/LTS)	T13: 2005—Unacceptable LOS at all arterial intersections during the p.m. peak hour (S/LTS)	Same as preferred alternative in 2005 (LTS/LTS)	Same as preferred alternative in 2005 (LTS/LTS)
T4: Elimination of 20 park-and-ride lot spaces (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
T5: Provision of bicycle lane and continuous sidewalks along Missouri Flat Road (LTS/LTS)	T14: No provision of bicycle lane or continuous sidewalks along Missouri Flat Road as part of project (S/LTS)	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
T6: Construction-related safety concerns (S/LTS)	Construction-related detours may occur in project vicinity with development of commercial uses (S/LTS)	Same as preferred alternative (S/LTS)	Impacts would be of a similar nature to the preferred alternative, but less severe in magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (S/LTS)

Table S.4-2. Continued

Preferred Alternative (SPDI), Phase 1 and Ultimate Phase (2025)	Comparison of Alternatives to the Proposed Project		
	No-Project Alternative, 2025	6-Lane Tight Diamond, Phase 1 and Ultimate Phase (2025)	4-Lane Tight Diamond, 2025
T7: 2015—Acceptable LOS and weaving conditions at all ramp junctions (LTS/LTS)	Not evaluated since the 2015 analysis was intended to evaluate the phasing of the project; LOS F is expected at the U.S. 50/Missouri Flat Road eastbound on-ramp and westbound off-ramp junctions with other ramp junctions expected to operate at better than LOS F; unacceptable weaving conditions are expected in 2015 given the unacceptable conditions in 2005 (S/LTS)	Same as preferred alternative in 2015 (LTS/LTS)	Same as preferred alternative in 2015 (LTS/LTS)
T8: 2015—Acceptable LOS at all arterial intersections (LTS/LTS)	Not evaluated since the 2015 analysis was intended to evaluate the phasing of the project; LOS F is expected in 2015 at all intersections given the unacceptable LOS under existing conditions and in 2005 (S/LTS)	Same as preferred alternative in 2015 (LTS/LTS)	Same as preferred alternative in 2015 (LTS/LTS)
T9: 2025—Acceptable LOS and weaving conditions at all ramp junctions (LTS/LTS)	T15: 2025—Unacceptable LOS and weaving operations at the eastbound and westbound off-ramps (S/LTS)	Same as preferred alternative in 2025 (LTS/LTS)	T17: 2025—Unacceptable LOS at the eastbound off-ramp (S/LTS)
T10: 2025—Acceptable LOS at all arterial intersections (LTS/LTS)	T16: 2025—Unacceptable LOS at all arterial intersections during the a.m. and p.m. peak hour (S/LTS)	Same as preferred alternative in 2025 (LTS/LTS)	T18: 2025—Potentially unacceptable LOS at all arterial intersections (S/LTS)
3.5/5.5 Air Quality			
AQ1: 2005—No exceedances of CO concentrations are expected since LOS is expected to be C or better at all intersections and links (LTS/LTS)	2005 no-project not evaluated since the 2005 analysis was intended to evaluate the construction year of the project; in 2005, CO violations could occur due to LOS E or F	Same as preferred alternative in 2005 (LTS/LTS)	Same as preferred alternative in 2005 (LTS/LTS)
AQ2: Temporary increase in construction-related ROG and NO _x emissions during grading and construction activities (S/LTS)	No construction-related emissions (LTS/LTS)	Same as preferred alternative (S/LTS)	Impacts would be of a similar nature to the preferred alternative, but less severe in magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (S/LTS)

Table S.4-2. Continued

Preferred Alternative (SPDI), Phase 1 and Ultimate Phase (2025)	Comparison of Alternatives to the Proposed Project		
	No-Project Alternative, 2025	6-Lane Tight Diamond, Phase 1 and Ultimate Phase (2025)	4-Lane Tight Diamond, 2025
AQ3: Temporary increase in construction-related PM10 emissions during grading and construction activities (S/LTS)	No construction-related emissions (LTS/LTS)	Same as preferred alternative (S/LTS)	Impacts would be of a similar nature to the preferred alternative, but less severe in magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (S/LTS)
AQ4: 2015 and 2025—No exceedances of CO standards (LTS/LTS)	No exceedances of CO concentrations in 2025; 2015 no-project not evaluated since the 2015 analysis was intended to evaluate the phasing of the project; in 2015, CO violations could occur due to LOS E or F	No exceedances of CO concentrations in 2015 and 2025 (LTS/LTS)	No exceedances of CO concentrations in 2015 and 2025 (LTS/LTS)
3.6/5.6 Noise			
N1: Exposure of noise-sensitive land uses to construction noise (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Impacts would be of a similar nature to the preferred alternative, but less severe magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (S/LTS)
N2: Exposure of noise-sensitive land uses to noise from blasting (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Impacts would be of a similar nature to the preferred alternative, but less severe magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (S/LTS)
N3: 2015— 2dB increase over future no-project levels and 4 dB increase over existing traffic noise levels (LTS/LTS)	1 dB or less increase in existing noise levels (LTS/LTS)	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
N4: 2025—2 dB increase over future no-project design year levels and 4 dB increase over existing traffic noise levels (LTS/LTS)	Future background growth increases existing noise levels over the County's residential noise standard (60 dB) at receivers 3 and 5; at other residential receivers (except 8), existing noise levels exceed the standard	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
3.7/5.7 Hydrology, Water Quality, and Floodplains			
WQ1: Changes in local stormwater drainage (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)

Table S.4-2. Continued

Preferred Alternative (SPDI), Phase 1 and Ultimate Phase (2025)	Comparison of Alternatives to the Proposed Project		
	No-Project Alternative, 2025	6-Lane Tight Diamond, Phase 1 and Ultimate Phase (2025)	4-Lane Tight Diamond, 2025
WQ2: Flooding and hydraulic changes (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
WQ3: Water quality impacts from changes in stormwater drainage (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
WQ4: Temporary construction water (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Impacts would be of a similar nature to the preferred alternative, but less severe in magnitude because only 1 phase (not 2 phases) of construction would occur (S/LTS)
3.8/5.8 Wildlife and Botanical Resources, Threatened and Endangered Species, and Wetlands and Waters of the United States			
BR1: Permanent loss of approximately 0.0016 hectare (0.004 acre) of Weber Creek and approximately 0.0032 hectare (0.008 acre) of oak woodland (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
BR2: Potential loss of 0.019 hectare (0.045 acre) of jurisdictional seasonal wetlands and of 0.0055 hectare (0.01 acre) of non-jurisdictional seasonal wetlands (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
BR3: Disturbance to approximately 0.1 hectare (0.25 acre) of Weber Creek and approximately 0.29 hectare (0.71 acre) of white alder riparian forest vegetation (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
BR4: Potential disturbance to 0.044 hectare (0.12 acre) of jurisdictional seasonal wetlands/drainages (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
BR5: Removal of and disturbance to up to 8–12 hectares (20–30 acres) of blue oak woodland and an undetermined number of native trees (SU in the short term and S/LTS in the long term)	No impact	Same as preferred alternative (SU in the short term and S/LTS in the long term)	Same as preferred alternative (SU in the short term and S/LTS in the long term)
BR6: No impact on special-status plant species (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)

Table S.4-2. Continued

Preferred Alternative (SPDI), Phase 1 and Ultimate Phase (2025)	Comparison of Alternatives to the Proposed Project		
	No-Project Alternative, 2025	6-Lane Tight Diamond, Phase 1 and Ultimate Phase (2025)	4-Lane Tight Diamond, 2025
BR7: Introduction of new noxious weeds or spread of existing noxious weed species (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
BR8: Potential disturbance of 1 blue elderberry shrub—valley elderberry longhorn beetle habitat (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
BR9: Potential disturbance of non-special-status nesting raptors (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
BR10: Loss of raptor foraging habitat (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
BR11: Disturbance of nesting swallows (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
BR12: Direct mortality and short-term disturbance of common slow-moving and ground-dwelling animals (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
BR13: Short-term disturbance and removal of habitat occupied by common wildlife species (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
BR14: Consistent with El Dorado County General Plan policies (LTS/LTS)	No impact	Same as preferred Alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
3.9/5.9 Historic and Archeological Preservation			
CR1: Potential damage to currently unknown cultural resources (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
3.10/5.10 Hazardous Materials and Earth Resources			
ER1: Change in topography from grading activities during construction (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative except for 1 phase (not 2 phases) of construction only in 2005 (S/LTS)
ER2: Potential for unstable slope conditions from grading activities during construction of embankments and cut slopes (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative except for 1 phase (not 2 phases) of construction only in 2005 (S/LTS)

Table S.4-2. Continued

Preferred Alternative (SPDI), Phase 1 and Ultimate Phase (2025)	Comparison of Alternatives to the Proposed Project		
	No-Project Alternative, 2025	6-Lane Tight Diamond, Phase 1 and Ultimate Phase (2025)	4-Lane Tight Diamond, 2025
ER3: Potential for structural damage from development in seismic risk zone 3 (S/LTS)	ER8: Potential for structural damage of the Weber Creek bridges during a seismic event (S/LTS)	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
ER4: Potential for structural damage from development on materials subject to liquefaction (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Same as preferred alternative (S/LTS)
ER5: Potential for increased short-term and long-term erosion rates from grading activities (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Impacts would be of a similar nature to the preferred alternative, but less severe in magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (S/LTS)
ER6: Potential for exposure of people to asbestos (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Impacts would be of a similar nature to the preferred alternative, but less severe in magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (S/LTS)
ER7: Potential for exposure of previously unknown hazardous wastes to construction workers and/or nearby land uses (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Impacts would be of a similar nature to the preferred alternative, but less severe in magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (S/LTS)
3.11/5.11 Visual			
VR1: Changes in regional visual character (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
VR2: Changes in views of landscape units 1 and 2 (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Same as preferred alternative (LTS/LTS)
VR3: Changes in views of landscape units 3, 4, 5, and 6 with construction of the visually unique SPDI (LTS/LTS)	No impact	Similar to the preferred alternative except that the ultimate interchange configuration would be a tight diamond rather than the more visually unique SPDI (LTS/LTS)	Similar to the preferred alternative except that the ultimate interchange configuration would be a tight diamond rather than the more visually unique SPDI (LTS/LTS)

Table S.4-2. Continued

Preferred Alternative (SPDI), Phase 1 and Ultimate Phase (2025)	Comparison of Alternatives to the Proposed Project		
	No-Project Alternative, 2025	6-Lane Tight Diamond, Phase 1 and Ultimate Phase (2025)	4-Lane Tight Diamond, 2025
VR4: Imperceptible changes in light and glare with 14 new fixtures at the interchange under the Ultimate Phase, 8 of which would be pedestrian-level on the overcrossing (LTS/LTS)	No impact	Same as preferred alternative except that the new light fixtures would be placed farther apart since there would be 2 additional lanes on the Missouri Flat Road overcrossing (LTS/LTS)	Imperceptible changes in light and glare with 11 new fixtures at the interchange under the Ultimate Phase, 9 of which would be pedestrian-level on the overcrossing (LTS/LTS)
VR5: Short-term visual changes in views from construction activities (S/LTS)	No impact	Same as preferred alternative (S/LTS)	Impacts would be of a similar nature to the preferred alternative, but less severe in magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (S/LTS)
3.12/5.12 Utilities/Emergency Services			
U1: No long-term disruption of services (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Impacts would be of a similar nature to the preferred alternative, but construction-related disruptions would be less severe in magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (LTS/LTS)
U2: Traffic management plan to address potential for temporary interference to law enforcement, fire protection, and emergency medical services (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Impacts would be of a similar nature to the preferred alternative, but construction-related disruptions would be less severe in magnitude because only 1 phase (not 2 phases) of construction would occur in 2005 (LTS/LTS)
U3: Generation of construction-related solid waste (LTS/LTS)	No impact	Same as preferred alternative (LTS/LTS)	Construction-related solid waste generation would be less since only 1 phase (not 2 phases) of construction (LTS/LTS)

Notes: Significance conclusion before mitigation/significance conclusion after mitigation. CEQA significance conclusions:

- LTS = less than significant.
- S = significant.
- SU = significant and unavoidable.

Economic impact = under CEQA, the social and economic effects of projects are not normally considered impacts on the environment; therefore, no criteria have been developed to evaluate the significance of purely social or economic effects of the project.

See Table S.4-1 for a listing of mitigation measures recommended for the preferred alternative.

See Chapter 5 for a description of mitigation measures recommended for the alternatives to the proposed project.

Table S.4-3. NEPA Impacts and Mitigation Measures Associated with the 4-Lane Tight Diamond Interchange

NEPA Impacts	NEPA Mitigation Measures
3.1/5.1 Land Use, Planning, and Growth	
LU1: Permanent right-of-way acquisitions from 19 parcels	None proposed
LU2: Compatible with planned land Uses	None proposed
LU3: No impact on community cohesion	None proposed
LU4: Consistent with local and regional plans and policies	None proposed
LU5: Potential displacement of 35 parking spaces at Prospector's Plaza	None proposed
LU6: Construction-related impacts	LU6a: Implement a traffic management plan
3.2/5.2 Community Impacts and Environmental Justice	
C1: Minor population impacts	None proposed
C2: Minor local tax revenue impacts	None proposed
C3: Minor local and roadside business impacts	None proposed
C4: Minor beneficial construction-related economic impacts	None proposed
3.3/5.3 Relocation	
R1: Displacement of 3 (Perks Court cul-de-sac option) or 2 (Perks Court realignment option) residences	R1a: Compensate displaced land uses in conformance with the Uniform Relocation Assistance and Real Property Acquisition Polices Act ^a
R2: Displacement of 3 commercial businesses	R1a: Compensate displaced land uses in conformance with the Uniform Relocation Assistance and Real Property Acquisition Polices Act ^a
3.4/5.4 Traffic and Transportation/Pedestrian and Bicycle Facilities	
T1: 2005—Acceptable LOS at ramp junctions	None proposed
T2: 2005—Unacceptable weaving conditions at the U.S. 50/Missouri Flat Road eastbound on-ramp until the U.S. 50/Forni Road/Placerville Drive interchange is improved	T2a: Provide temporary ramp metering for the U.S. 50 eastbound on-ramp from Missouri Flat Road
T3: 2005—Acceptable LOS at all arterial intersections	None proposed
T4: Elimination of 20 park-and-ride lot spaces	T4a: Establish another park-and-ride lot
T5: Provision of bicycle lane and continuous sidewalks along Missouri Flat Road	None proposed
T6: Construction-related safety concerns	LU6a: Implement a traffic management plan
T7: 2015—Acceptable LOS and weaving conditions at all ramp junctions	None proposed
T8: 2015—Acceptable LOS at all arterial intersections	None proposed
3.5/5.5 Air Quality	
AQ1: 2005—No exceedances of CO concentrations are expected since LOS is expected to be C or better at all intersections and links	None proposed

Table S.4-3. Continued

NEPA Impacts	NEPA Mitigation Measures
AQ2: Temporary increase in construction-related ROG and NO _x emissions during grading and construction activities	AQ2a: Mitigate construction equipment exhaust emissions consistent with EDCAPCD requirements
AQ3: Temporary increase in construction-related PM10 emissions during grading and construction activities	AQ3a: Comply with Rule 403 of the South Coast AQMD, as required by the EDCAPCD
AQ4: 2015—No exceedances of CO standards	None proposed
AQ5: Transportation conformity achieved	None proposed
3.6/5.6 Noise	
N1: Exposure of noise-sensitive land uses to construction noise	N1a: Employ noise-reduction construction measures
N2: Exposure of noise-sensitive land uses to noise from blasting	N2a: Employ measures to limit blast noise
N3: 2015—1–3 dB increase in existing traffic noise levels	Sound wall is not acoustically feasible
3.7/5.7 Hydrology, Water Quality, and Floodplains	
WQ1: Changes in local stormwater drainage	None proposed
WQ2: Flooding and hydraulic changes	None proposed
WQ3: Temporary construction water quality impacts	WQ3a: Obtain authorization under the NPDES permit for permanent post-construction Best Management Practices
WQ4: Water quality impacts from changes in stormwater drainage	WQ4a: Obtain authorization under the NPDES stormwater permit for construction-related Best Management Practices BR3f: Limit in-water construction activities to the summer low- or no-flow period BR3g: Ensure that turbidity increases do not exceed central valley regional water quality control board standards BR3h: Develop and implement a toxic materials control and spill-response plan BR3i: Store hazardous materials at an approved storage facility
3.8/5.8 Wildlife and Botanical Resources, Threatened and Endangered Species, and Wetlands and Waters of the United States	
BR1: Permanent loss of approximately 0.0016 hectare (0.004 acre) of Weber Creek and approximately 0.0032 hectare (0.008 acre) of oak woodland	BR3a: Conduct a biological resources education program for construction crews and enforce construction restrictions BR3b: Retain a biologist to monitor construction activities within Weber Creek BR3c: Install construction barrier fencing around the construction area to protect sensitive biological resources that will be avoided BR3d: Conduct preconstruction surveys and minimize mortality to CRLF and foothill yellow-legged frog BR3e: Conduct preconstruction surveys to minimize mortality to northwestern pond turtles BR3f: Limit in-water construction activities to the summer low- or no-flow period BR3g: Ensure that turbidity increases do not exceed Central Valley Regional Water Quality Control Board standards BR3h: Develop and implement a toxic materials control and spill-response plan

Table S.4-3. Continued

NEPA Impacts	NEPA Mitigation Measures
	BR3i: Store hazardous materials at an approved storage facility BR3j: Minimize long-term impacts on woody riparian vegetation and associated habitat
BR2: Potential loss of 0.019 hectare (0.045 acre) of jurisdictional seasonal wetlands and of 0.0055 hectare (0.01 acre) of non-jurisdictional seasonal wetlands	BR3c: Install construction barrier fencing around the construction area to protect sensitive biological resources that will be avoided BR3f: Limit in-water construction activities to the summer low- or no-flow period BR3g: Ensure that turbidity increases do not exceed Central Valley Regional Water Quality Control Board standards BR3h: Develop and implement a Toxic Materials Control and Spill-Response Plan BR3i: Store hazardous materials at an approved storage facility
BR3: Disturbance to approximately 0.1 hectare (0.25 acre) of Weber Creek and approximately 0.29 hectare (0.71 acre) of white alder riparian forest vegetation	BR3a: Conduct a biological resources education program for construction crews and enforce construction restrictions BR3b: Retain a biologist to monitor construction activities within Weber Creek BR3c: Install construction barrier fencing around the construction area to protect sensitive biological resources that will be avoided BR3d: Conduct preconstruction surveys and minimize mortality to CRLF and foothill yellow-legged frog BR3e: Conduct preconstruction surveys to minimize mortality to northwestern pond turtles BR3f: Limit in-water construction activities to the summer low- or no-flow period BR3g: Ensure that turbidity increases do not exceed Central Valley Regional Water Quality Control Board standards BR3h: Develop and implement a toxic materials control and spill-response plan BR3i: Store hazardous materials at an approved storage facility BR3j: Minimize long-term impacts on woody riparian vegetation and associated habitat BR3k: Enhance riparian habitat by developing and implementing a riparian restoration plan
BR4: Potential disturbance to 0.044 hectare (0.12 acre) of jurisdictional seasonal wetlands/drainages	BR3c: Install construction barrier fencing around the construction area to protect sensitive biological resources that will be avoided BR3f: Limit in-water construction activities to the summer low- or no-flow period BR3g: Ensure that turbidity increases do not exceed Central Valley Regional Water Quality Control Board standards BR3h: Develop and implement a toxic materials control and spill-response plan BR3i: Store hazardous materials at an approved storage facility
BR5: Removal of and disturbance to up to 8–12 hectares (20–30 acres) of blue oak woodland and an undetermined number of native trees	BR3c: Install construction barrier fencing around the construction area to protect sensitive biological resources that will be avoided BR5a: Minimize and compensate for impacts on blue oak woodlands and individual native oak trees by replanting oaks
BR6: No impact on special-status plant species	None proposed

Table S.4-3. Continued

NEPA Impacts	NEPA Mitigation Measures
BR7: Introduction of new noxious weeds or spread of existing noxious weed species	BR7a: Avoid the introduction of new noxious weeds or the spread of existing noxious weeds
BR8: Potential disturbance of 1 blue elderberry shrub—valley elderberry longhorn beetle habitat	BR8a: Avoid disturbance of valley elderberry longhorn beetle habitat BR3a: Conduct a biological resources education program for construction crews and enforce construction restrictions BR3b: Retain a biologist to monitor construction activities
BR9: Potential disturbance of non-special-status nesting raptors	None proposed
BR10: Loss of raptor foraging habitat	None proposed
BR11: Disturbance of nesting swallows	BR11a: Avoid construction during swallow nesting season or remove empty nests and prevent new nesting
BR12: Direct mortality and short-term disturbance of common slow-moving and ground-dwelling animals	None proposed
BR13: Short-term disturbance and removal of habitat occupied by common wildlife species	None proposed
BR14: Consistent with El Dorado County policies	None proposed
3.9/5.9 Historic and Archeological Preservation	
CR1: Potential damage to currently unknown cultural resources	CR1a: Implement procedures for the unanticipated discovery of cultural resources
3.10/5.10 Hazardous Materials and Earth Resources	
ER1: Change in topography from grading activities during construction	ER1a: Approve grading design plans consistent with County and Caltrans grading permit requirements
ER2: Potential for unstable slope conditions from grading activities during construction of embankments and cut slopes	ER2a: Approve final design plans consistent with County and Caltrans' standard earthwork specifications
ER3: Potential for structural damage from development in seismic risk zone 3	ER3a: Approve final design plans that are consistent with Caltrans and Uniform Building Code standards for seismic safety
ER4: Potential for structural damage from development on materials subject to liquefaction	ER3a: Approve final design plans that are consistent with Caltrans and Uniform Building Code standards for seismic safety
ER5: Potential for increased short-term and long-term erosion rates from grading activities	ER1a: Approve grading design plans consistent with County and Caltrans grading permit requirements
ER6: Potential for exposure of people to asbestos	ER6a: If unknown deposits of asbestos are found during construction, comply with El Dorado County's Asbestos Ordinance
ER7: Potential for exposure of previously unknown hazardous wastes to construction workers and/or nearby land uses	ER7a: Implement recommendations related to hazardous materials contained in the project ISA
3.11/5.11 Visual	
VR1: Changes in regional visual character	None proposed
VR2: Changes in views of landscape units 1 and 2	None proposed
VR3: Changes in views of landscape units 3, 4, 5, and 6	None proposed
VR4: Imperceptible changes in light and glare with 11 new fixtures at the interchange, 9 of which would be pedestrian-level on the overcrossing	None proposed

Table S.4-3. Continued

NEPA Impacts	NEPA Mitigation Measures
VR5: Short-term visual changes in views from construction activities	VR5a: Implement measures to minimize short-term light and glare on nearby residents from nighttime construction
3.12/5.12 Utilities/Emergency Services	
U1: No long-term disruption of services	None proposed
U2: Potential for temporary interference to law enforcement, fire protection, and emergency medical services	LU6a: Implement a traffic management plan
U3: Generation of construction-related solid waste	None proposed

^a This mitigation measure is not required under NEPA because this impact is not adverse. However, this measure meets the legal obligation of a law other than NEPA.

Table S.4-4. Comparison of NEPA Impacts Associated with the 4-Lane Tight Diamond Interchange and the No-Action Alternative

4-Lane Tight Diamond Interchange (Proposed Action)	Comparison of the No-Action Alternative to the Proposed Action
3.1/5.1 Land Use, Planning, and Growth	
LU1: Permanent right-of-way acquisitions from 19 parcels	No impact
LU2: Compatible with planned land uses	No impact
LU3: No impact on community cohesion	No impact
LU4: Consistent with local and regional plans and policies	LU7: Inconsistent with adopted plans
LU5: Potential displacement of 35 parking spaces at Prospector's Plaza	No impact
LU6: Construction-related impacts	No impact
3.2/5.2 Community Impacts and Environmental Justice	
C1: Minor population impacts	No impact
C2: Minor local tax revenue impacts	No impact
C3: Minor local and roadside business impacts	No impact
C4: Minor beneficial construction-related economic impacts	No impact
3.3/5.3 Relocation	
R1: Displacement of 3 (Perks Court cul-de-sac option) or 2 (Perks Court realignment option) residences	No impact
R2: Displacement of 3 commercial businesses	No impact
3.4/5.4 Traffic and Transportation/Pedestrian and Bicycle Facilities	
T1: 2005—Acceptable LOS at ramp junctions	T11: 2005—Acceptable LOS at ramp junctions
T2: 2005—Unacceptable weaving conditions at the U.S. 50/Missouri Flat Road eastbound on-ramp until the U.S. 50/Forni Road/Placerville Drive interchange is improved	T12: 2005—Unacceptable weaving conditions at the U.S. 50/Missouri Flat Road eastbound and U.S. 50/Forni Road/ Placerville Drive westbound on-ramp until the U.S. 50/Forni Road/Placerville Drive interchange is improved
T3: 2005—Acceptable LOS at all arterial intersections	T13: 2005—Unacceptable LOS at all arterial intersections during the p.m. peak hour
T4: Elimination of 20 park-and-ride lot spaces	No impact
T5: Provision of bicycle lane and continuous sidewalks along Missouri Flat Road	T14: No provision of bicycle lane or continuous sidewalks along Missouri Flat Road as part of project
T6: Construction-related safety concerns	Construction-related detours may occur in project vicinity with development of commercial uses
T7: 2015—Acceptable LOS and weaving conditions at all ramp junctions	Not evaluated since the 2015 analysis was intended to evaluate the phasing of the project; LOS F is expected at the U.S. 50/Missouri Flat Road eastbound on-ramp and westbound off-ramp with other ramp junctions expected to operate at better than LOS F; unacceptable weaving conditions are expected in 2015 given the unacceptable conditions in 2005
T8: 2015—Acceptable LOS at all arterial intersections	Not evaluated since the 2015 analysis was intended to evaluate the phasing of the project; LOS F is expected in 2015 at all intersections given the unacceptable LOS under existing conditions and in 2005

Table S.4-4. Continued

4-Lane Tight Diamond Interchange (Proposed Action)	Comparison of the No-Action Alternative to the Proposed Action
3.5/5.5 Air Quality	
AQ1: 2005—No exceedances of CO concentrations are expected since LOS is expected to be C or better at all intersections and links	2005 no-project not evaluated since the 2005 analysis was intended to evaluate the construction year of the project; in 2005, CO violations could occur due to LOS E or F
AQ2: Temporary increase in construction-related ROG and NO _x emissions during grading and construction activities	No construction-related emissions
AQ3: Temporary increase in construction-related PM10 emissions during grading and construction activities	No construction-related emissions
AQ4: 2015—No exceedances of CO standards	2015 no-project not evaluated since the 2015 analysis was intended to evaluate the phasing of the project; in 2015, CO violations could occur due to LOS E or F
AQ5: Transportation conformity achieved	Maintaining project components in current configuration does not reflect 1999 MTP
3.6/5.6 Noise	
N1: Exposure of noise-sensitive land uses to construction noise	No impact
N2: Exposure of noise-sensitive land uses to noise from blasting	No impact
N3: 2015—1–3 dB increase in existing traffic noise levels	2015 no-project conditions were not analyzed
3.7/5.7 Hydrology, Water Quality, and Floodplains	
WQ1: Changes in local stormwater drainage	No impact
WQ2: Flooding and hydraulic changes	No impact
WQ3: Water quality impacts from changes in stormwater drainage	No impact
WQ4: Temporary construction water	No impact
3.8/5.8 Wildlife and Botanical Resources, Threatened and Endangered Species, and Wetlands and Waters of the United States	
BR1: Permanent loss of approximately 0.0016 hectare (0.004 acre) of Weber Creek and approximately 0.0032 hectare (0.008 acre) of oak woodland	No impact
BR2: Potential loss of 0.019 hectare (0.045 acre) of jurisdictional seasonal wetlands and of 0.0055 hectare (0.01 acre) of non-jurisdictional seasonal wetlands	No impact
BR3: Disturbance to approximately 0.1 hectare (0.25 acre) of Weber Creek and approximately 0.29 hectare (0.71 acre) of white alder riparian forest vegetation	No impact
BR4: Potential disturbance to 0.044 hectare (0.12 acre) of jurisdictional seasonal wetlands/drainages	No impact
BR5: Removal of and disturbance to up to 8–12 hectares (20–30 acres) of blue oak woodland and an undetermined number of native trees	No impact
BR6: No impact on special-status plant species	No impact
BR7: Introduction of new noxious weeds or spread of existing noxious weed species	No impact
BR8: Potential disturbance of 1 blue elderberry shrub—valley elderberry longhorn beetle habitat	No impact
BR9: Potential disturbance of non-special-status nesting raptors	No impact
BR10: Loss of raptor foraging habitat	No impact

Table S.4-4. Continued

4-Lane Tight Diamond Interchange (Proposed Action)	Comparison of the No-Action Alternative to the Proposed Action
BR11: Disturbance of nesting swallows	No impact
BR12: Direct mortality and short-term disturbance of common slow-moving and ground-dwelling animals	No impact
BR13: Short-term disturbance and removal of habitat occupied by common wildlife species	No impact
BR14: Consistent with El Dorado County General Plan policies	No impact
3.9/5.9 Historic and Archeological Preservation	
CR1: Potential damage to currently unknown cultural resources	No impact
3.10/5.10 Hazardous Materials and Earth Resources	
ER1: Change in topography from grading activities during construction	No impact
ER2: Potential for unstable slope conditions from grading activities during construction of embankments and cut slopes	No impact
ER3: Potential for structural damage from development in seismic risk zone 3	ER8: Potential for structural damage of the Weber Creek bridges during a seismic event
ER4: Potential for structural damage from development on materials subject to liquefaction	No impact
ER5: Potential for increased short-term and long-term erosion rates from grading activities	No impact
ER6: Potential for exposure of people to asbestos	No impact
ER7: Potential for exposure of previously unknown hazardous wastes to construction workers and/or nearby land uses	No impact
3.11/5.11 Visual	
VR1: Changes in regional visual character	No impact
VR2: Changes in views of landscape units 1 and 2	No impact
VR3: Changes in views of landscape units 3, 4, 5, and 6 with construction of the 4-Lane Tight Diamond Interchange	No impact
VR4: Imperceptible changes in light and glare with 11 new fixtures at the interchange, 9 of which would be pedestrian-level on the overcrossing	No impact
VR5: Short-term visual changes in views from construction activities	No impact
3.12/5.12 Utilities/Emergency Services	
U1: No long-term disruption of services	No impact
U2: Traffic management plan to address potential for temporary interference to law enforcement, fire protection, and emergency medical services	No impact
U3: Generation of construction-related solid waste	No impact

Notes: See Table S.4-3 for a listing of mitigation measures recommended for the proposed action.
 See Chapter 3 for a description of mitigation measures recommended for the No-Action Alternative.

Implementation of the proposed action would result in an irretrievable commitment of energy and other nonrenewable resources to be used in constructing the project such as water, gravel, and sand. Land used in the construction of the proposed action is also a nonrenewable resource that will be committed to a long-term use. The decisionmakers on the project may conclude that the commitment of these resources is justified at this time since the proposed action would provide substantial benefits in terms of increased traffic safety and operations, the provision of additional capacity to accommodate planned growth, and seismically retrofitting the Weber Creek bridges.

S.8 Environmentally Preferred Alternative

NEPA and CEQA require that an environmentally preferred alternative be identified in the environmental document. Chapters 3 (NEPA) and 5 (CEQA) address the impacts of each alternative and Tables S.4-4 (NEPA) and S.4-2 (CEQA) compare the alternatives. Although the No-Action Alternative/No-Project Alternative would not result in any construction-related impacts, it would not solve existing traffic safety and operational deficiencies or accommodate projected future traffic volumes associated with approved and planned development in the Missouri Flat area. It would also be inconsistent with adopted plans, have adverse transportation impacts, and have the potential for causing structural damage to the Weber Creek bridges during a seismic event if the bridges are not seismically retrofitted as part of another project.

Of the remaining alternatives under CEQA, the 4-Lane Tight Diamond Alternative (2025) has the least severe construction-related impacts of all of the build alternatives since it requires only 1 phase of construction and slightly less land acquisition. (Land acquisition would be required of the same parcels as the preferred alternative and the 6-Lane Tight Diamond Alternative, but no land would be acquired from these parcels during a second phase of construction.) However, the 4-Lane Tight Diamond Alternative (2025) would result in unacceptable levels of service at the eastbound off-ramp at the U.S. 50/Missouri Flat Road interchange and potentially at all studied intersections in 2025. The 6-Lane Tight Diamond Alternative requires slightly less land acquisition during the Ultimate Phase than the SPDI. (All parcels would require the same permanent acquisitions under the SPDI and the 6-Lane Tight Diamond Alternative except for APNs 327-140-02, 327-190-32, 327-190-34, and 327-190-35.

For these parcels, no permanent acquisitions would be required under the 6-Lane Tight Diamond Alternative whereas the SPDI would require the acquisition of 0.27 hectare [0.66 acre] from these parcels.) Some may also consider the tight diamond interchange configuration as less visually unique than the SPDI configuration. The 6-Lane Tight Diamond would consist of similar facility features (relatively straight ramp configurations) to the existing interchange, whereas the SPDI would reconfigure the ramps in a circular/arching manner. The residents of the County are also more accustomed to viewing tight diamond interchanges than SPDI's as no other SPDI exists in the County (EDAW 1998). Other impacts associated with the 6-Lane Tight Diamond Alternative would be the same as the SPDI. If the County adopts a new general plan that allows for a level of growth consistent with (i.e., no greater than) what is allowed under the Writ of Mandate, the 4-Lane Tight Diamond Alternative (2025) is considered the environmentally preferred alternative under CEQA. If the County adopts a new general plan that provides for more growth than allowed by the Writ of Mandate (see section 1.2, "Project Background," for a description of the Writ of Mandate), the County considers the SPDI and the 6-Lane Tight Diamond Alternative to be comparable in terms of environmental impacts since their differences are so minor. Under an increased growth scenario, the 6-lane Tight Diamond Alternative would be environmentally superior because of its ability to handle greater levels of traffic at acceptable LOS.

Under NEPA, the 4-lane tight diamond interchange is the only feasible build alternative. Therefore, it is considered the environmentally preferable alternative under NEPA.

S.9 Summary of Coordination and Consultation with Other Agencies

The NEPA/CEQA process has been integrated with the review and consultation requirements of other relevant federal programs. The following list specifies relevant federal requirements, the documentation produced to comply with applicable federal requirements, and the location of the discussion documenting compliance with applicable federal requirements in this joint document. Section 4(f) of the U.S. Department of Transportation Act does not apply to this project since the project would not use land from a publicly-owned park, recreation area, or wildlife or waterfowl refuge or historic site.

Federal Requirement	Documentation Produced	Report Section
Section 106 of the National Historic Preservation Act	Historic property survey report (Jones & Stokes 2002j)	Section 3.9, Chapter 6, and Appendices B and C
Transportation conformity under the federal Clean Air Act	Conformity evaluation	Section 3.5
Section 7 of the federal Endangered Species Act	Final biological assessment (Jones & Stokes 2003)	Section 3.8 and Appendices B and C
Section 404 of the federal Clean Water Act	Preliminary wetland delineation (Jones & Stokes 2002k) and discussion of permit requirements	Section 3.8 and Appendix B
Executive Order 11988 (Floodplain Management)	Design hydraulic study (Norman S. Braithwaite 2002) and required findings	Section 3.7
Executive Order 11990 (Protection of Wetlands)	Required findings	Section 3.8
Executive Order 12898 (Environmental Justice)	Required evaluation	Section 3.2
Executive Order 11312 (Invasive Species)	Required evaluation	Section 3.8

S.10 Summary of Public Involvement Process

The County has encouraged general public and agency review of the proposed project through the release of a notice of preparation (NOP), public meetings, and a project newsletter. Chapter 6 describes the public involvement process. Appendix D contains a copy of the NOP and NOP comments received.

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