

Chapter 1 Project Objectives/Purpose and Need and Description of the Proposed Project/Action

1.1 Project Location

The project site is located in the foothills of the Sierra Nevada mountains in western El Dorado County at the U.S. 50/Missouri Flat Road interchange, approximately 1.3 kilometers (0.8 mile) west of the Placerville city limits between the El Dorado Road and the Forni Road/Placerville Drive interchanges (Figure 1.1-1).

1.2 Project Background

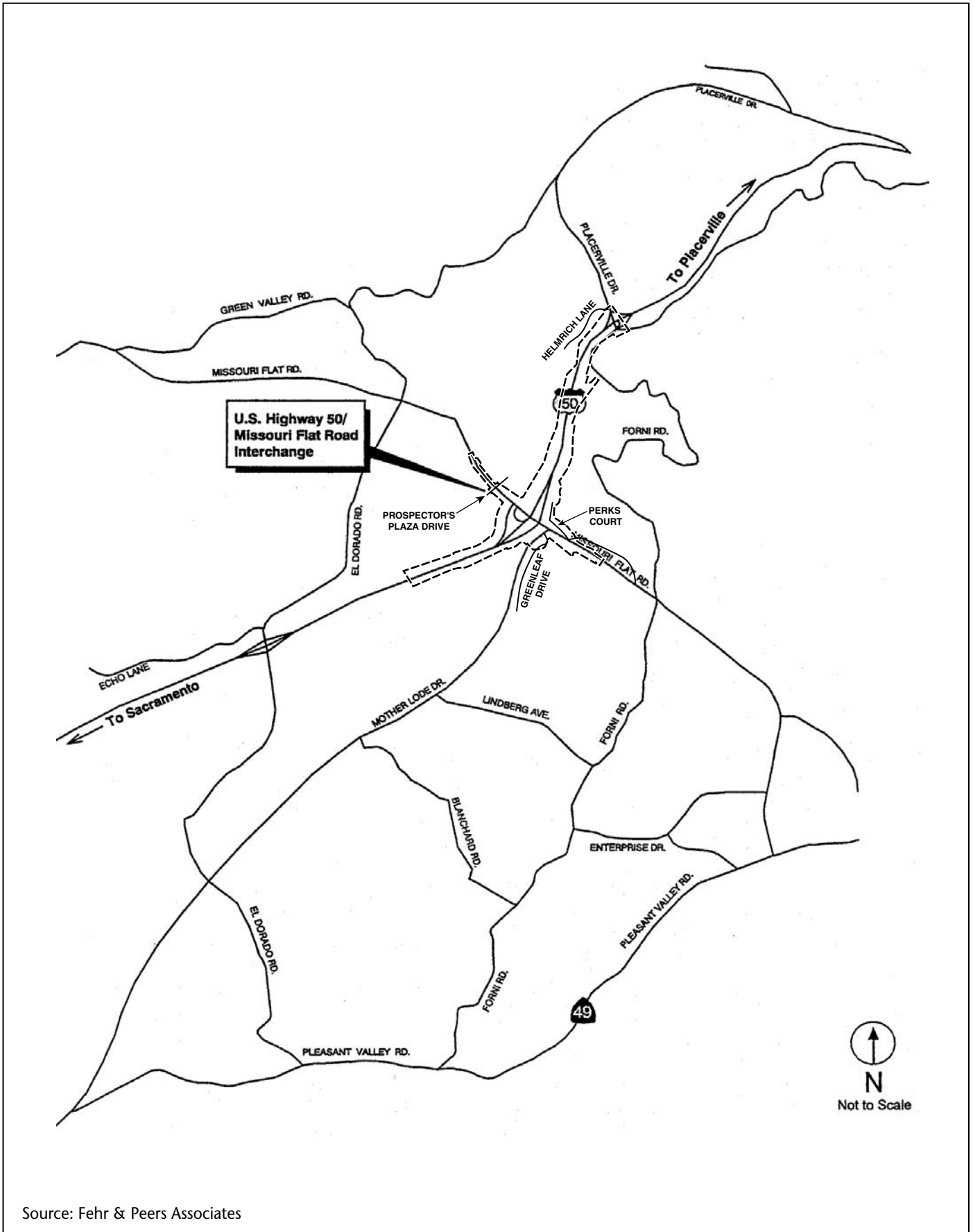
In 1995, the County began to consider various methods for reducing traffic delays and congestion through the Missouri Flat corridor. As Caltrans requires that State facilities be designed for a 20-year design life (Caltrans 1995), the County evaluated interchange designs that would provide an adequate level of service (LOS) through year 2025, assuming population projections issued by SACOG. The County initially studied 5 alternatives for the northern half of the interchange and 5 alternatives for the southern half of the interchange. Six combinations of these half interchanges were also analyzed for operational adequacy. The conclusions from this preliminary screening recommended that the SPDI and the modified L-9 interchange be further studied. In December 1996, the County Department of Transportation presented the SPDI and modified L-9 interchange to the County Board of Supervisors for consideration. The County Board of Supervisors chose the SPDI as the “preferred alternative” because it would result in reduced impacts on existing and proposed development in the vicinity of the interchange, requires less right-of-way acquisition, has better traffic operational characteristics, and has project costs similar to those of the modified L-9 interchange design.

In 1997, Caltrans identified concerns regarding the SPDI’s basic design with a crest vertical curve. In 1998, Caltrans requested that the County develop another equally effective alternative that would address this design issue and potentially operate as efficiently as the SPDI. Six additional alternatives were developed and further analyzed for their operational characteristics. The results of the analyses indicated

that the SPDI and a modified L-8 configuration could meet capacity requirements for the planned horizon, year 2025. The County's preferred alternative continued to be the SPDI configuration since it had exhibited superior overall performance when compared to other alternatives analyzed.

In December 1998, the County certified a final program EIR for, and then adopted, the Missouri Flat Area Master Circulation and Funding Plan (MC&FP), consistent with Policies 2.1.4.8 and 10.2.7.3 of the County's January 1996 General Plan (General Plan). At that time, the General Plan had not yet been held to be invalid by the Sacramento County Superior Court in *El Dorado County Taxpayers for Quality Growth et al. v. County of El Dorado*. Policy 2.1.4.8 of the 1996 General Plan calls for the adoption of a specific plan, redevelopment plan, or *master circulation and funding plan* to address development in the Missouri Flat area and current and future roadway capacity deficiencies. Policy 10.2.7.3 calls for development of a comprehensive road circulation plan for the Missouri Flat Road Corridor Area that includes the identification and development of a specific funding mechanism that overcomes existing operational deficiencies and accommodates future traffic demands to the year 2015. Although the MC&FP EIR looked at a two-phase interchange project, the Board of Supervisors, in approving the MC&FP, approved only the first phase. (The information contained in the MC&FP program EIR has been utilized as the basis for some of the cumulative impact analysis and affected environment information contained in this joint document. Independent project-level analyses, including on-site surveys, were conducted to support the evaluations contained in this joint document based on the latest design plans for the proposed project. Appendix J of this joint document contains a table that describes the relationship of each program-level mitigation measure adopted as part of the MC&FP and the project-level mitigation measures that are recommended in this joint document.)

Since, in the aftermath of approval of the MC&FP, the County still wanted to pursue the SPDI, Caltrans established a quality team and developed design criteria that Caltrans could use in the review and approval of SPDI. In June 1999, the County commissioned preparation of an independent Alternatives Analysis Report for the Missouri Flat Road Interchange (Quincy Engineering 1999) using these new SPDI design criteria. The Alternatives Analysis Report recommended the SPDI as the preferred alternative since it eliminates one intersection over the modified L-8 design, improving intersection spacing and operations; it also improves stopping sight



Source: Fehr & Peers Associates

Figure 1.1-1
Project Vicinity

distance through the interchange as compared to the modified L-8 design; and both configurations require approval of several design exceptions. At the conclusion of this thorough examination, Caltrans provided conceptual approval of the SPDI alternative in November 1999 consistent with the policy and design considerations established by the Caltrans quality team. A Project Study Report (HDR Engineering, Inc. 2000) was approved for this project in August 2000. Chapter 2, "Project Alternatives," further describes the screening process used to select the preferred alternative.

The Project Study Report identified that the project was proposed for construction in two phases. Phase 1 would entail construction of 4-lane tight diamond configuration. Phase 2 would involve construction of the SPDI.

In December 2000, the County implemented the MC&FP by adopting a finding that an adequate threshold level of funding was available ("critical mass") to finance the circulation plan element of the MC&FP. In March 2002, the County formed a Community Facilities District to provide the financial mechanism for implementing the MC&FP. The MC&FP intends to fund more than \$40 million (2000 dollars) for improvements to the U.S. 50/Missouri Flat Road interchange and adjacent arterials and collector roads. The major roadway improvements included in the MC&FP financing plan are the Phase 1 improvements (4-lane tight diamond) to the U.S. 50/Missouri Flat Road interchange, improvements to Missouri Flat Road from Headington Road to the Sacramento Placerville Transportation Corridor (SPTC), and construction of the new Missouri Flat Road/Pleasant Valley Road (Economic & Planning Systems 2002 and Boyer pers. comm.).

The County is in the process of preparing a new General Plan to replace the General Plan as adopted in January 1996. The 1996 General Plan was set aside in September 1999 as the result of a determination by the Sacramento County Superior Court that, in certain respects, the County had not fully complied with CEQA in preparing the EIR and findings for the General Plan. (See *El Dorado County Taxpayers for Quality Growth, et al. v. El Dorado County Board of Supervisors and El Dorado County* (No. 96CS01290.) After a hearing and argument on the form of the writ to be issued, including the scope of the remedy to be imposed during the period in which the County worked to correct these CEQA violations, the court issued a Writ of Mandate that governs the County's land use decisions during the interim period between the

issuance of the Writ and the completion of a new General Plan. The County is expected to adopt its new General Plan sometime in mid-2004.

Several aspects of the Writ of Mandate are pertinent to the proposed project and its environmental review. First, the Writ of Mandate generally suspends the County's authority to issue any discretionary land use approvals or entitlements for *residential* housing development. Restrictions imposed on non-residential development, including commercial and industrial development and public works projects, are much less severe. Non-residential development generally is permitted as long as it satisfies several criteria. Public improvement projects may be approved as long as specified findings can be made, and as long as the improvements are not intended solely or primarily to serve new development otherwise prohibited by the Writ.

Second, the Writ recognizes that certain residential projects with *vested rights* specifically defined in the Writ could proceed even while the new General Plan is being prepared. Thus, subject to some limitations, the Writ does not prevent the issuance of discretionary approvals, permits, or other entitlements for residential development pursuant to development agreements or vesting tentative maps in place prior to February 5, 1999. (Writ, p. 11, § 2.12.2(5)(1).)

Third, the Writ expressly allows the approval of “non-residential” (e.g., commercial) development, provided (i) that the property at issue was zoned, as of early 1999, for the use in question *or* was designated for such a use in both the 1996 General Plan and the “Public Review Draft General Plan” that functioned as a *de facto* General Plan during the period, in the early and mid-1990s, when the General Plan update process was underway, *and* (ii) the project (a) will not significantly impair the County’s ability to adopt and implement a new General Plan, (b) complies with all other requirements of law, and (c) is consistent with the text and maps of the 1996 General Plan or whatever General Plan text and maps were in effect when rights to develop were vested. (Writ, pp. 12, 14, §§ 2.12.2(5)(3), 2.12.2(5)(8).)

Fourth, the Writ expressly allows implementation of “capital improvement projects,” provided that they are not “for the sole or primary purpose of serving future development which would require approvals which are prohibited by the terms of this writ,” and provided further that the project (i) will not significantly impair the County’s ability to adopt and implement a new General Plan, (ii) complies with all other requirements of law, and (iii) is consistent with the text and maps of the 1996 General Plan or whatever General Plan text and maps were in effect when rights to

develop were vested. “Capital improvements projects shall not be deemed to be for the primary purpose of serving future, yet to be approved development, if the County finds, based on substantial evidence, that such improvements would be warranted in the absence of such future development. Capital improvements may be for any purpose other than those expressly prohibited . . ., including, but not limited to, *preservation of public health and safety, hazard elimination, serving existing needs and those anticipated as a result of approved development* or development not requiring discretionary approval, and *improving efficiency of existing facilities.*” (Writ, pp. 13, 14, §§ 2.12.2(5)(6), 2.12.2(5)(8) [emphasis added].)

Fifth, the Writ authorizes the County to approve projects, including capital projects, submitted to it for review by other government agencies, provided that the projects (i) will not significantly impair the County’s ability to adopt and implement a new General Plan, (ii) comply with all other requirements of law, and (iii) are consistent with the text and maps of the 1996 General Plan or whatever General Plan text and maps were in effect when rights to develop were vested. (Writ, pp. 13, 14, §§ 2.12.2(5)(4)(e), 2.12.2(5)(8).)

The proposed 4-lane tight diamond interchange configuration (Phase 1 of the CEQA proposed project), as a capital improvement project, is clearly authorized under the Writ, in that it would not be intended to serve future residential growth, but rather is necessary to address capacity deficiencies and safety hazards that already exist, and will only be made worse by commercial development near Placerville that can occur under the terms of the Writ. Notably, the 4-lane tight diamond is not only consistent with the text of the 1996 General Plan, but is expressly contemplated by it. (See 1996 General Plan, Vol. 1 (Goals, Objectives, and Policies), p. 184 (Policy 10.2.7.3.)) Notably, a legal challenge to the MC&FP was filed on the ground that it was inconsistent with the General Plan, but was ultimately dismissed on December 4, 2001.

It should be noted that the reports referenced in this section, including the Alternatives Analysis Report (Quincy Engineering 1999), Project Study Report (HDR Engineering, Inc. 2000), MC&FP (Economic & Planning Systems 2000) , MC&FP EIR (EDAW 1998), Missouri Flat Area Community Facilities District No. 2002-01 Financing Plan (Economic & Planning Systems 2002), and the critical mass approvals (Boyer pers. comm.) are available for public review at the County Department of Transportation offices; see the List of Technical Studies in the

Introduction of this joint document for the address and phone number of County offices.)

1.3 Project Approach

Although a 20-year design for the U.S. 5/Missouri Flat Road interchange has historically been evaluated by the County, consistent with Caltrans' design requirements, the County and FHWA will act only on Phase 1 (4-lane tight diamond interchange) as part of this project since Phase 1 is included in the approved 2025 MTP and 2003/05 MTIP, as well as the MC&FP, MC&FP critical mass approval, and Community Facilities District financing plan. If the County adopts a new General Plan that provides for more growth than currently allowed by the Writ of Mandate, the County would have the option of pursuing Phase 2 (SPDI), as a separate project, if the following occurred:

- funding is available to build Phase 2,
- the Phase 2 improvements are added by Board 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.

Since the Phase 2 project would be proposed as a separate project and would not likely be built until some time after 2015, additional environmental review would likely be required for the Phase 2 project pursuant to Sections 15162 and 15163 of the State CEQA Guidelines and 23 CFR 771.129 (U.S. Department of Transportation NEPA regulations) before it could be constructed.

Phase 2 is analyzed in this report since as noted above (see also the "CEQA Project Objectives" section below), Caltrans' policy is that State facilities be designed for a 20-year design life. Moreover, in evaluating predicted population growth over 20-year time periods, Caltrans looks to regional entities such as SACOG for their population projections, and does not simply consider population growth that might occur under general plans within a region as they exist at the time of the prediction. 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. As described above, County studies have shown that the SPDI is operationally superior to the other Phase 2 interchange configurations evaluated. The SPDI also provides the best and most efficient enhancement of the 4-lane tight diamond configuration since it eliminates significant future modifications to the 4-lane tight diamond design and does not incur significant throw-away costs. Furthermore, in December 1996, the County Board of Supervisors selected the SPDI as the "preferred alternative". For purposes of consistency and ease of reference, the SPDI is referred to as the CEQA "preferred alternative" in this report. The SPDI alternative embodies the objectives not only of the County, but also of Caltrans.

1.4 Existing Interchange

The existing U.S. 50/Missouri Flat Road overcrossing was constructed in 1969 as part of an overall U.S. 50 improvement project in the County. The overcrossing consists of 3 lanes, with the center lane providing alternating left-turn lanes, narrow shoulders, and a sidewalk on only the east side of the bridge. The existing modified L-8 interchange design is a basic single-lane diagonal with on- and off-ramps in the eastbound direction, and a loop off-ramp and diagonal on-ramp in the westbound direction. Missouri Flat Road intersects with Mother Lode Drive, 70 meters (230 feet) south of the eastbound ramp terminus with Missouri Flat Road. Mother Lode Drive parallels U.S. 50 on the south and provides access to and from commercial, institutional, and residential uses along Mother Lode Drive. Farther south along Missouri Flat Road, approximately 130 meters (427 feet) south of the eastbound ramp terminus, the Missouri Flat Road intersection with Perks Court provides access to a limited number of residences and a commercial establishment east of Missouri Flat Road. Missouri Flat Road connects with Prospector's Plaza Drive 120 meters (394 feet) north of the westbound ramp intersection. Prospector's Plaza Drive provides incoming and outgoing access to retail/commercial uses east and west of Missouri Flat Road. Additional shopping center driveways exist at 60 and 190 meters (197 and 623 feet) from the westbound ramp intersection.

Missouri Flat Road is designated as a County arterial roadway. Recently, Missouri Flat Road was improved (south of Mother Lode Drive to the Sacramento Placerville Transportation Corridor, just past the Wal-Mart site) to a 4-lane facility (2 lanes in each direction), with a 2-way left turn lane in the center. North of the overcrossing,

Missouri Flat Road is a 2-lane road with 1 lane in each direction, except in the vicinity of the Prospector's Plaza Drive intersection where it widens to accommodate turning movements.

1.5 CEQA Project Objectives and Description of the Proposed Project

1.5.1 CEQA Project Objectives

The proposed project would improve the 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;

Recent operational analyses (Fehr & Peers Associates, Inc. 2002) indicate that the Missouri Flat Road/Mother Lode Drive intersection operates at level of service (LOS) F (oversaturation, forced flow, extensive queuing) during the p.m. peak hour which affects upstream intersection operations. As a result, extensive queuing occurs at most intersections for more than one hour during the evening. Field observations confirm that significant delays and queuing occurs at several locations along the Missouri Flat Road corridor during the p.m. peak hours and that the overall corridor can be described as operating at LOS F. Substantial delays and queuing were observed at the following locations: on northbound Missouri Flat Road from the U.S. 50 eastbound on-ramp to beyond the Mother Lode Drive intersection, on southbound Missouri Flat Road from Mother Lode Drive through the eastbound off-ramp and onto the U.S. 50 overcrossing, at the Missouri Flat Road/eastbound off-ramp intersection, at the Missouri Flat Road/westbound loop off-ramp intersection, and on southbound Missouri Flat Road between the westbound on-ramp and Prospector's Plaza Drive intersection.

The Project Study Report (HDR Engineering, Inc. 2000) for this project indicates that gridlock conditions are expected during all peak periods under 2020 conditions if no improvements are made to the interchange. The interchange ramps, weaving sections, and intersections are expected to operate at LOS F during peak hours without improvements.

- address safety problems associated with the interchange;

Accident data for U.S. 50 in the vicinity of the Missouri Flat Road interchange for the 3-year period from July 1997 to June 2000 indicate that the accident rate was greater than the average rate for similar mainline facilities (see Table 3.4-6 for a

description of these rates). The accident rate was also greater than average for the eastbound ramps and westbound on-ramp (Table 3.4-6). Although none of the accidents resulted in fatalities, injuries occurred in approximately 45% of the mainline accidents and about 35% of the ramp accidents.

- meet Caltrans' planning and design requirements for those portions of the project within State right of way.

The interchange design must meet Caltrans' design standards since Caltrans is owner and operator of the State Highway System. The Caltrans' Highway Design Manual (Caltrans 1995) includes a policy (Chapter 100, Basic Design Policies, Topic 103 Design Designation, 103.2 Design Period) that states that the geometric design of new facilities should normally be based on estimated traffic 20 years after completion of construction. The County, as lead agency, has also been required to design the proposed (two-phase) project with a 20-year planning horizon in mind. Caltrans requires such a planning period because, among other reasons, it believes that planning for shorter increments of time tends to lead to more frequent disruptions associated with construction. The less frequently that improvements are needed, the less often highway travelers will be inconvenienced by construction-related activities. Caltrans also considers the 20-year timeframe to be a reasonable investment period for capital expenditures associated with new and capacity-increasing projects.

In predicting regional and local population levels for the year 2025, Caltrans and the County have relied on numbers issued by SACOG. These numbers, necessarily, look beyond the time horizon of the current El Dorado County planning framework, which, as explained earlier, is currently constrained by the 1999 Writ of Mandate resulting from a legal challenge to the 1996 General Plan. Although the County, in approving development and infrastructure, is constrained by the Writ, Caltrans is not; nor is SACOG.

1.5.2 CEQA Project Description

The proposed project (also referred to as the SPDI or preferred alternative in Chapter 5) involves the following (see Figure 1.1-1):

- 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.

Construction staging areas may be located on parcels off of Perks Court which would be fully acquired for project construction, in the area where the existing U.S. 50 westbound loop off-ramp would be replaced, and east of the Weber Creek bridges north (off of Helmrich Lane) and south (just east of the old U.S. 50 bridge) of U.S. 50.

Phase 1 of the project is also included in the 2025 MTP approved by FHWA on July 24, 2002, and the 2003/05 MTIP amendment #1 approved by FHWA on December 23, 2002. In July 2002, the Sacramento Area Council of Governments (SACOG) certified an EIR for the 2025 MTP. The MTP EIR includes numerous mitigation measures that apply to identified significant environmental impacts of projects included in the MTP. The MTP EIR states that, to the extent feasible, SACOG will require that the lead agency for a project include relevant mitigation measures proposed in the MTP EIR as a condition of being included in the MTIP. Appendix J of this joint document contains a table that describes the relationship of the program-

level MTP mitigation and the project-level mitigation measures recommended in this joint document.

As mentioned in the Summary preceding this chapter, the County has identified the need to modify one small part of one adopted mitigation measure for the MC&FP labeled 4.8-1 in the program EIR and County Board of Supervisor Findings of Fact (CEQA Findings of Fact and Statement of Overriding Considerations on the Board of Supervisors of El Dorado County for the Missouri Flat Area Master Circulation and Funding Plan, December 15, 1998). (See Appendix J, page 6 of 14.) For reasons explained in sections 3.7 and 5.7 (Hydrology, Water Quality, and Floodplains), this measure, which on its face applies to all “retail development or roadway improvements” within the MC&FP area, has proven to be unnecessary and unworkable in one small respect, as applied to the proposed interchange only (as opposed to retail development and other “road improvements”). For this reason, the EIR portion of this joint document is not only a project EIR for the interchange, but is also a supplemental EIR for the MC&FP with an extremely narrow focus. (See CEQA Guidelines, Section 15163.) Because the proposed change to MC&FP Mitigation Measure 4.8-1 will not cause or contribute to any environmental impacts beyond those addressed herein, the supplemental EIR portion of this document, as a practical matter, will be limited to the discussion of hydrological issues in Chapters 3.7 and 5.7. The change will not affect any other projects (including other road improvements) within the MC&FP. As modified, MC&FP Mitigation Measure 4.8-1 would read as follows (modified language is shown as underlined text):

Prior to the approval of a tentative map, or, for projects without maps, issuance of a building permit, a project applicant for retail development or roadway improvements in the MC&FP Area, including the project applicants for Sundance Plaza and El Dorado Villages Shopping Center projects, shall submit and obtain approval of the project drainage report by the El Dorado County Department of Transportation. This report shall demonstrate that, for all such projects other than the Missouri Flat interchange itself, post-development stormwater peak discharge levels from the project will remain at existing peak levels through the use of one or all of the following alternative mitigation measures. The drainage report shall be prepared by a Certified Civil Engineer and shall be in conformance with the El Dorado County Drainage Manual adopted by the Board of Supervisors in March 1995. The project applicant shall be financially responsible for his/her portion of stormwater drainage facility maintenance requirements and agreements. The drainage report shall include, at a minimum, written text addressing existing conditions, the effects of project improvements, all appropriate calculations, a

watershed map, potential increases in downstream flows, proposed onsite improvements, and drainage easements, if necessary, to accommodate flows from the site.

- a) Design and construction of onsite detention facilities of adequate size to reduce peak discharge to pre-development levels. The detention facility may be incorporated into the parking lot design. If a detention facility is incorporated into the proposed parking lot, parking within the facility area shall be restricted during storm events through the placement of cones to ensure vehicles are not damaged by detained water. Permanent maintenance of the detention facility shall include semi-annual inspections to ensure facility integrity and debris removal as necessary.
- b) Design and construction of a regional detention facility of adequate size to reduce peak discharge to pre-development levels. The detention facility may serve as a regional basin for multiple sites. Permanent maintenance of the detention basin shall include semi-annual inspections to ensure facility integrity and debris removal as necessary.

and/or

- c) Improvements to existing storm drainage system to reduce peak discharge to pre-development levels. This may include up-sizing of pipes, culverts, etc., at downstream locations. Permanent maintenance of the drainage facilities shall include semi-annual inspections to ensure facility integrity and debris removal as necessary.

Project Phasing and Schedule

An interim 4-lane tight diamond interchange configuration is proposed for Phase 1 to replace the existing interchange. As described in detail in Chapter 2, “Project Alternatives”, two other interchange designs were also considered for Phase 1: the modified L-9 and the modified L-8. Both 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.

The proposed interim 4-lane tight diamond interchange configuration is the minimum design that solves existing traffic operational deficiencies and provides adequate capacity for development in the County allowed by the court-issued Writ of Mandate. Construction of Phase 1 improvements is expected to commence in the summer of 2005 and provide an adequate LOS until at least 2015. Figure 1.6-1 shows the Phase

1 interchange and the project area. The project area is defined as the area proposed for construction activities, construction staging areas, and construction access.

An ultimate SPDI configuration would be constructed in Phase 2 (the Ultimate Phase), but only if warranted, based on future LOS, prior to the LOS reaching an unacceptable level (Figure 1.6-2). (As an alternative to the SPDI, Missouri Flat Road could be widened to 3 lanes in each direction, and the interchange could be widened while maintaining a diamond interchange. This alternative is described in section 2.2.2, "6-Lane Tight Diamond Alternative".) 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 Board adopts a land use map as part of the new General Plan that warrants a Phase 2 interchange, the Board would then have the option of adopting a preferred Phase 2 configuration, without having to conduct further environmental review (absent the presence of conditions described under CEQA Guidelines Sections 15162 and 15163 and 23 CFR 771.129), if the following occurs:

- funding is available to build Phase 2,
- the Phase 2 improvements are added by Board 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.

Alternatively, the project could still be built in phases under this scenario (i.e. if adoption of a General Plan land use map that warrants a Phase 2 interchange) since Phase 2 is not likely to be needed until some time after 2015. Additional environmental review is likely to be required if the Phase 2 project is built after 2015 since the conditions identified under CEQA Guidelines Sections 15162 and 15163 and 23 CFR 771.129 would likely be triggered.

The alternatives to the SPDI are described in section 2.2, "Project Alternatives". These alternatives include the No-Project Alternative (2025), the 6-Lane Tight Diamond Alternative, and the 4-Lane Tight Diamond Alternative (2025).

Phase 1: 4-Lane Tight Diamond

Construction of the 4-lane tight diamond interchange would consist of replacing the existing westbound loop off-ramp with a diagonal ramp, moving the beginning of the ramp eastward. A diagonal on-ramp opposite the proposed diagonal westbound off-ramp would replace the existing westbound on-ramp. The westbound ramp intersection would be relocated approximately 90 meters (295 feet) south of its existing location. The eastbound off-ramp would include 1 left-turn lane, 1 combination left-turn/right-turn lane, and 1 right-turn lane. The westbound off-ramp would include 2 left-turn lanes and 2 right-turn lanes. Grading would be provided along the westbound on-ramp to allow for future ramp metering when warranted. Retaining walls would be constructed as needed to reduce impacts on adjacent properties. Phase 1 would also consist of reconstructing Missouri Flat Road between 235 meters (771 feet) north of Prospector's Plaza Drive to approximately 150 meters (357 feet) south of Perks Court to provide 2 through lanes in each direction. Missouri Flat Road would be realigned slightly to the east in order to reduce impacts to traffic during construction. The existing overcrossing structure would be replaced. Two left-turn lanes would be provided on Missouri Flat Road at the ramp intersections. The Prospector's Plaza and Mother Lode Drive intersections would be reconstructed to conform to the realigned Missouri Flat Road.

Two different options for reconstructing Perks Court are evaluated in this joint document. Figure 1.6-3 shows the Perks Court cul-de-sac option, in which Perks Court would be cul-de-saced close to Missouri Flat Road. Figures 1.6-4 and 1.6-5 show the Perks Court realignment option, in which Perks Court would be fully reconstructed to a 250-meter (820-foot) long street. Figure 1.6-4 shows the reconstruction of Perks Court under Phase 1, and Figure 1.6-5 shows it under the Ultimate Phase. Under the Ultimate Phase, Perks Court would require further realignment since the toe of fill of the SPDI eastbound on-ramp encroaches farther to the east than does the on-ramp for the 4-lane tight diamond interchange under Phase 1.

During Phase 1, the eastbound and westbound Weber Creek bridges would be seismically retrofitted, including providing additional strength to the structural steel bracing members and providing additional concrete at the top of the piers. Both bridges would also be widened to provide for 1 auxiliary lane and standard shoulders eastbound (connecting the eastbound on-ramp at the Missouri Flat Road interchange to the eastbound off-ramp at the Forni Road/Placerville Drive interchange) and

westbound (connecting the westbound on-ramp at the Forni Road/ Placerville Drive interchange to the westbound off-ramp at the Missouri Flat Road interchange). To support the widened superstructure, a total of 6 additional piers and associated foundations would be constructed adjacent to the 6 existing piers. The bridge abutments would also be widened to accommodate the widened superstructure. These proposed improvements to the superstructure of the Weber Creek bridges represent the minimum design that is required to seismically retrofit the bridges, solve existing traffic operational deficiencies, and provide adequate capacity for development in the County allowed by the court-issued Writ of Mandate.

Ultimate Phase: Single Point Diamond

The Ultimate Phase would be initiated, but only if warranted, based on LOS, prior to the future LOS reaching an unacceptable level. The overcrossing structure constructed in Phase 1 would be modified to the SPDI configuration. The structure would incorporate a single intersection for all Missouri Flat Road and U.S. 50 ramps motorized and non-motorized traffic, as part of the SPDI. The eastbound off-ramp would be widened to provide 2 left-turn lanes and 2 right-turn lanes at the ramp intersection. A third southbound lane would be constructed on Missouri Flat Road between the eastbound ramp intersection and the Perks Court intersection. In addition, minor lane configuration changes would occur on Missouri Flat Road to convert the tight diamond configuration to the SPDI configuration. Mother Lode Drive would be widened to provide 2 left-turn lanes and 1 right-turn lane in the eastbound direction and 2 lanes in the westbound direction in the Ultimate Phase. If the Perks Court realignment option is chosen for implementation (rather than the cul-de-sac option), Perks Court would be further realigned under the Ultimate Phase as described above under the “Phase 1: 4-Lane Tight Diamond” section.

A second auxiliary lane would be constructed in the westbound direction during the Ultimate Phase (SPDI). In the eastbound direction, 1 ramp lane from the eastbound on-ramp at Missouri Flat Road would also be extended across the bridge and would merge with the new eastbound auxiliary lane (constructed in Phase 1) just east of the bridge. As the piers and foundations constructed as a part of Phase 1 would support these additional lane, the substructure of the bridges (and the riparian corridor below the bridges) would not be affected.

Right-of-Way Acquisition

Construction of the Perks Court cul-de-sac option would require fully acquiring 3 occupied residential parcels on Perks Court (Assessor's Parcel Numbers [APNs] 327-130-18, 327-130-19, and 327-130-20) and 1 occupied business parcel on Perks Court (APN 327-130-20 [H&S Gas Mart]); these acquisitions would occur during Phase 1. Construction of the Perks Court realignment option under the SPDI would require fully acquiring 2 occupied residential parcels on Perks Court (APNs 327-130-20 and 327-130-21) and 1 occupied business parcel on Perks Court (APN 327-130-20 [H&S Gas Mart]); these acquisitions would also occur during Phase 1.

Reconstruction of Missouri Flat Road, north of Prospector's Plaza Drive, would require fully acquiring 2 occupied business parcels on Missouri Flat Road (327-130-35 [Jack-in-the-Box] and 327-130-14 [Chevron gas station]) (Figure 1.6-2); these acquisitions would likely occur during Phase 1. Partial acquisition or temporary construction easements of business and institutional properties would be needed in the northeast and southwest quadrants during both Phases 1 and 2. Partial acquisition of residential properties along Perks Court and Missouri Flat Road in the southeast quadrant would also be needed. All acquired property would be dedicated to the State of California, except for a portion of the property along Perks Court and the acquired property along Missouri Flat Road, which would be retained by the County.

Project Cost Estimate

The total cost of the proposed improvements, including construction and right-of-way acquisition, is estimated at \$45.6 million (2003 dollars); Phase 1 is estimated to cost approximately \$29.9 million with the Ultimate Phase cost estimated at \$15.7 million. Phase 1 would be funded by the MC&FP and other local, state, and federal funds programmed by the County Transportation Commission. The MC&FP intends to establish infrastructure improvements within the Missouri Flat area that would be funded through a variety of sources including fees and taxes generated by future retail development.

1.6 NEPA Purpose and Need and Description of the Proposed Action

1.6.1 NEPA Purpose and Need

FHWA will act only on Phase 1 (4-lane tight diamond interchange) since FHWA can only certify environmental documents for projects that are included in the approved 2025 MTP and 2003/05 MTIP. FHWA has identified the following purposes 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 to 2015;

Recent operational analyses (Fehr & Peers Associates, Inc. 2002) indicate that the Missouri Flat Road/Mother Lode Drive intersection operates at level of service (LOS) F (oversaturation, forced flow, extensive queuing) during the p.m. peak hour which affects upstream intersection operations. As a result, extensive queuing occurs at most intersections for more than one hour during the evening. Field observations confirm that significant delays and queuing occurs at several locations along the Missouri Flat Road corridor during the p.m. peak hours and that the overall corridor can be described as operating at LOS F. Substantial delays and queuing were observed at the following locations: on northbound Missouri Flat Road from the U.S. 50 eastbound on-ramp to beyond the Mother Lode Drive intersection, on southbound Missouri Flat Road from Mother Lode Drive through the eastbound off-ramp and onto the U.S. 50 overcrossing, at the Missouri Flat Road/eastbound off-ramp intersection, at the Missouri Flat Road/westbound loop off-ramp intersection, and on southbound Missouri Flat Road between the westbound on-ramp and Prospector's Plaza Drive intersection.

The Project Study Report (HDR Engineering, Inc. 2000) for this project indicates that gridlock conditions are expected during all peak periods under 2020 conditions if no improvements are made to the interchange. The interchange ramps, weaving sections, and intersections are expected to operate at LOS F during peak hours without improvements.

- address safety problems associated with the interchange;

Accident data for U.S. 50 in the vicinity of the Missouri Flat Road interchange for the 3-year period from July 1997 to June 2000 indicate that the accident rate was greater than the average rate for similar mainline facilities (see Table 3.4-6 for a description of these rates). The accident rate was also greater than average for the eastbound ramps and westbound on-ramp (Table 3.4-6). Although none of the accidents resulted in fatalities, injuries occurred in approximately 45% of the mainline accidents and about 35% of the ramp accidents.

1.6.2 NEPA Description of the Proposed Action

The proposed action (also referred to as the 4-lane tight diamond interchange in Chapter 3) involves the following (see Figure 1.1-1):

- 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 single lane eastbound off-ramp that is widened to 3 lanes at the ramp intersection to provide 1 left-turn lane, 1 lane with optional left or right turns, and 1 right-turn lane;
 - 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.

Construction staging areas may be located on parcels off of Perks Court which would be fully acquired for project construction, in the area where the existing U.S. 50 westbound loop off-ramp would be replaced, and east of the Weber Creek bridges

north (off of Helmrich Lane) and south (just east of the old U.S. 50 bridge) of U.S. 50.

The proposed action is also included in the 2025 MTP approved by FHWA on July 24, 2002, and the 2003/05 MTIP amendment #1 approved by FHWA on December 23, 2002. In July 2002, the Sacramento Area Council of Governments (SACOG) certified an EIR for the 2025 MTP. The MTP EIR includes numerous mitigation measures that apply to identified significant environmental impacts of projects included in the MTP. The MTP EIR states that, to the extent feasible, SACOG will require that the lead agency for a project include relevant mitigation measures proposed in the MTP EIR as a condition of being included in the MTIP. Appendix J of this joint document contains a table that describes the relationship of the program-level MTP mitigation and the project-level mitigation measures recommended in this joint document.

Project Characteristics

The 4-lane tight diamond interchange is the minimum design that solves existing traffic operational deficiencies and provides adequate capacity for development in the County allowed by the court-issued Writ of Mandate. Construction of this interchange is expected to commence in the summer of 2005 and provide an adequate LOS until at least 2015. Figure 1.6-1 shows the proposed interchange and the project area. The project area is defined as the area proposed for construction activities, construction staging areas, and construction access.

Construction of the 4-lane tight diamond interchange would consist of replacing the existing westbound loop off-ramp with a diagonal ramp, moving the beginning of the ramp eastward. A diagonal on-ramp opposite the proposed diagonal westbound off-ramp would replace the existing westbound on-ramp. The westbound ramp intersection would be relocated approximately 90 meters (295 feet) south of its existing location. The eastbound off-ramp would include 1 left-turn lane, 1 combination left-turn/right-turn lane, and 1 right-turn lane. The westbound off-ramp would include 2 left-turn lanes and 2 right-turn lanes. Grading would be provided along the westbound on-ramp to allow for future ramp metering when warranted. Retaining walls would be constructed as needed to reduce impacts on adjacent properties. The 4-lane tight diamond interchange would also consist of reconstructing Missouri Flat Road between 235 meters (771 feet) north of Prospector's Plaza Drive to approximately 150 meters (357 feet) south of Perks Court

to provide 2 through lanes in each direction. Missouri Flat Road would be realigned slightly to the east in order to reduce impacts to traffic during construction. The existing overcrossing structure would be replaced. Two left-turn lanes would be provided on Missouri Flat Road at the ramp intersections. The Prospector's Plaza and Mother Lode Drive intersections would be reconstructed to conform to the realigned Missouri Flat Road.

Two different options for reconstructing Perks Court are evaluated in this joint document. Figure 1.6-3 shows the Perks Court cul-de-sac option, in which Perks Court would be cul-de-saced close to Missouri Flat Road. Figure 1.6-4 shows the Perks Court realignment option, in which Perks Court would be fully reconstructed to a 250-meter (820-foot) long street.

The eastbound and westbound Weber Creek bridges would be seismically retrofitted, including providing additional strength to the structural steel bracing members and providing additional concrete at the top of the piers. Both bridges would also be widened to provide for 1 auxiliary lane and standard shoulders eastbound (connecting the eastbound on-ramp at the Missouri Flat Road interchange to the eastbound off-ramp at the Forni Road/Placerville Drive interchange) and westbound (connecting the westbound on-ramp at the Forni Road/Placerville Drive interchange to the westbound off-ramp at the Missouri Flat Road interchange). To support the widened superstructure, a total of 6 additional piers and associated foundations would be constructed adjacent to the 6 existing piers. The bridge abutments would also be widened to accommodate the widened superstructure. These proposed improvements to the superstructure of the Weber Creek bridges represent the minimum design that is required to seismically retrofit the bridges, solve existing traffic operational deficiencies, and provide adequate capacity for development in the County allowed by the court-issued Writ of Mandate.

Right-of-Way Acquisition

Construction of the Perks Court cul-de-sac option would require fully acquiring 3 occupied residential parcels on Perks Court (Assessor's Parcel Numbers [APNs] 327-130-18, 327-130-19, and 327-130-20) and 1 occupied business parcel on Perks Court (APN 327-130-20 [H&S Gas Mart]). Construction of the Perks Court realignment option would require fully acquiring 2 occupied residential parcels on Perks Court (APNs 327-130-20 and 327-130-21) and 1 occupied business parcel on Perks Court (APN 327-130-20 [H&S Gas Mart]).

Reconstruction of Missouri Flat Road, north of Prospector's Plaza Drive, would require fully acquiring 2 occupied business parcels on Missouri Flat Road (327-130-35 [Jack-in-the-Box] and 327-130-14 [Chevron gas station]) (Figure 1.6-2). Partial acquisition or temporary construction easements of business and institutional properties would be needed in the northeast and southwest quadrants. Partial acquisition of residential properties along Perks Court and Missouri Flat Road in the southeast quadrant would also be needed. All acquired property would be dedicated to the State of California, except for a portion of the property along Perks Court and the acquired property along Missouri Flat Road, which would be retained by the County.

Project Cost Estimate

The total cost of the proposed improvements, including construction and right-of-way acquisition, is approximately \$29.9 million (2003 dollars). The project will be funded by the MC&FP and other local, state, and federal funds programmed by the County Transportation Commission. The MC&FP intends to establish infrastructure improvements within the Missouri Flat area that would be funded through a variety of sources including fees and taxes generated by future retail development.

1.7 Related Project

Caltrans approved a Project Study Report in June 2001 that evaluates upgrades to the U.S. 50/Forni Road/Placerville Drive interchange and the Ray Lawyer Drive overcrossing in the City of Placerville needed to improve traffic operations and to accommodate projected 20-year increases in traffic volumes at this location. Three alternatives were studied:

- **Alternative 1:** reconstructing the U.S. 50/Forni Road/Placerville Drive interchange, widening the interchange ramps, widening Forni Road, constructing a westbound auxiliary lane on U.S. 50 between the Forni Road/Placerville Drive and Missouri Flat Road interchanges, and constructing a westbound on-ramp from the existing Ray Lawyer Drive overcrossing;
- **Alternative 2:** reconstructing the U.S. 50/Forni Road/Placerville Drive interchange as described for Alternative 1 and constructing a full interchange at the Ray Lawyer Drive overcrossing by constructing eastbound hook ramps and westbound diagonal ramps; and
- **Alternative 3:** reconstructing the U.S. 50/Forni Road/Placerville Drive interchange as described for Alternative 1 and constructing a full interchange at

the Ray Lawyer Drive overcrossing by constructing diagonal ramps for all directions, except for an eastbound loop on-ramp.

Funding for project approval/environmental document was approved by the El Dorado County Transportation Commission (EDCTC) in September 2001. Funding for plans, specifications, and estimates was approved as part of the 2002 State Transportation Improvement Program on April 4, 2002. Construction funding is anticipated through a combination of local, regional, and federal funding. A draft 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 as a system.

1.8 Required Permits and Approvals

1.8.1 Lead Agency Approvals

The discretionary actions required by the County as the lead agency under CEQA for project implementation include the following:

- certification of the environmental impact report (EIR),
- approval of Phase 1 of the proposed project. The County Board of Supervisors will reserve judgment on whether to commit to building Phase 2 until a later date, as described above.
- approval of right-of-way acquisition for Phase 1,
- approval of final engineering designs and advertisement of construction bids for Phase 1, and
- approval to award the construction contract for Phase 1.

The discretionary actions required by the Federal Highway Administration (FHWA) as lead agency under the National Environmental Policy Act (NEPA) for project implementation include the following:

- certification of compliance with NEPA, Section 106 of the National Historic Preservation Act, Section 7 of the federal Endangered Species Act, federal Clean Air Act, Section 404 of the Clean Water Act, and Executive Orders 11988 (Floodplain Management), 11990 (Protection of Wetlands), 12898 (Environmental Justice), and 13112 (Invasive Species);
- approval of the 4-lane tight diamond interchange;

- approval of federal funding; and
- approval of right-of-way acquisition for the 4-lane tight diamond interchange.

The discretionary actions required by Caltrans, as owner and operator of the State Highway System, and as FHWA's agent for NEPA compliance, are:

- approval of Design Exception Fact Sheets – Caltrans has signed Mandatory (13 controlling design criteria required by FHWA when using federal funds) and Advisory (Caltrans' design criteria) Design Exception Fact Sheets that provide approval of design standard exceptions for this project;
- approval of the Project Report to proceed to final design following approval of the CEQA and NEPA documents;
- oversight of construction contract (Plans, Specifications, and Engineer's Estimate) throughout the final design process to assure continued application of mandatory and advisory design standards;
- oversight of right-of-way appraisals and acquisition to ensure conformance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), as amended on April 2, 1987, and the Uniform Relocation Act (California Government Code, Chapter 16, Section 7260, et seq.; and
- oversight of the construction contract implementation to ensure the proper use of federal funds throughout the construction process.

1.8.2 Approval by Other Agencies

The following agencies are expected to use the EIR/environmental assessment (EA) for approval of the following actions:

- U.S. Army Corps of Engineers—Section 404 permit under the Clean Water Act;
- California Department of Fish and Game—1601 Streambed Alteration Agreement; and
- Regional Water Quality Control Board—Section 401 Water Quality Certification.

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