

1.1 INTRODUCTION

The California Department of Transportation (Caltrans) is the lead California Environmental Quality Act (CEQA) agency responsible for maintaining and improving the California highway system within the Lake Tahoe Basin. Caltrans proposes to implement water quality improvement measures along segments of U.S. Highway 50 (US 50) and State Route (SR) 89 in El Dorado County to comply with National Pollutant Discharge Elimination System (NPDES) permit requirements, and address planned improvements and changes that are part of the Lake Tahoe Basin Environmental Improvement Program (EIP).

To achieve the above objectives, a preliminary Program of improvements has been developed and will be refined as each project segment or element is further evaluated and designed. This CEQA document has therefore been prepared to address the overall proposed improvements in a Program Environmental Impact Report (EIR). CEQA defines a program EIR as "...an EIR which may be prepared on a series of actions that can be characterized as one large project that are related either:

- Geographically,
- A logical part in the chain of contemplated actions,
- In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
- As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways" (CEQA Guidelines Section 15168).

The proposed Program has elements of all of the above criteria. Within the overall limits on US 50 and SR 89, segments where work is proposed have been initially defined, and water quality and highway design improvements common to all segments have been identified, at least conceptually. The design and implementation of the improvements will undergo further evaluation as field studies, design, and planning advance. This EIR, therefore, addresses the impacts of the proposed improvements as an overall program with a study area that encompasses all segments of the highways where work will take place.

1.2 LOCATION

Caltrans' responsibilities under the EIP addressed in this program-level EIR cover eight specific segments of US 50 and SR 89 located south and west of Lake Tahoe (see Figure 1-1). Detailed maps of the corridor segments are included in Appendix A.

On US 50, the Program will make improvements to three segments of the highway corridor:

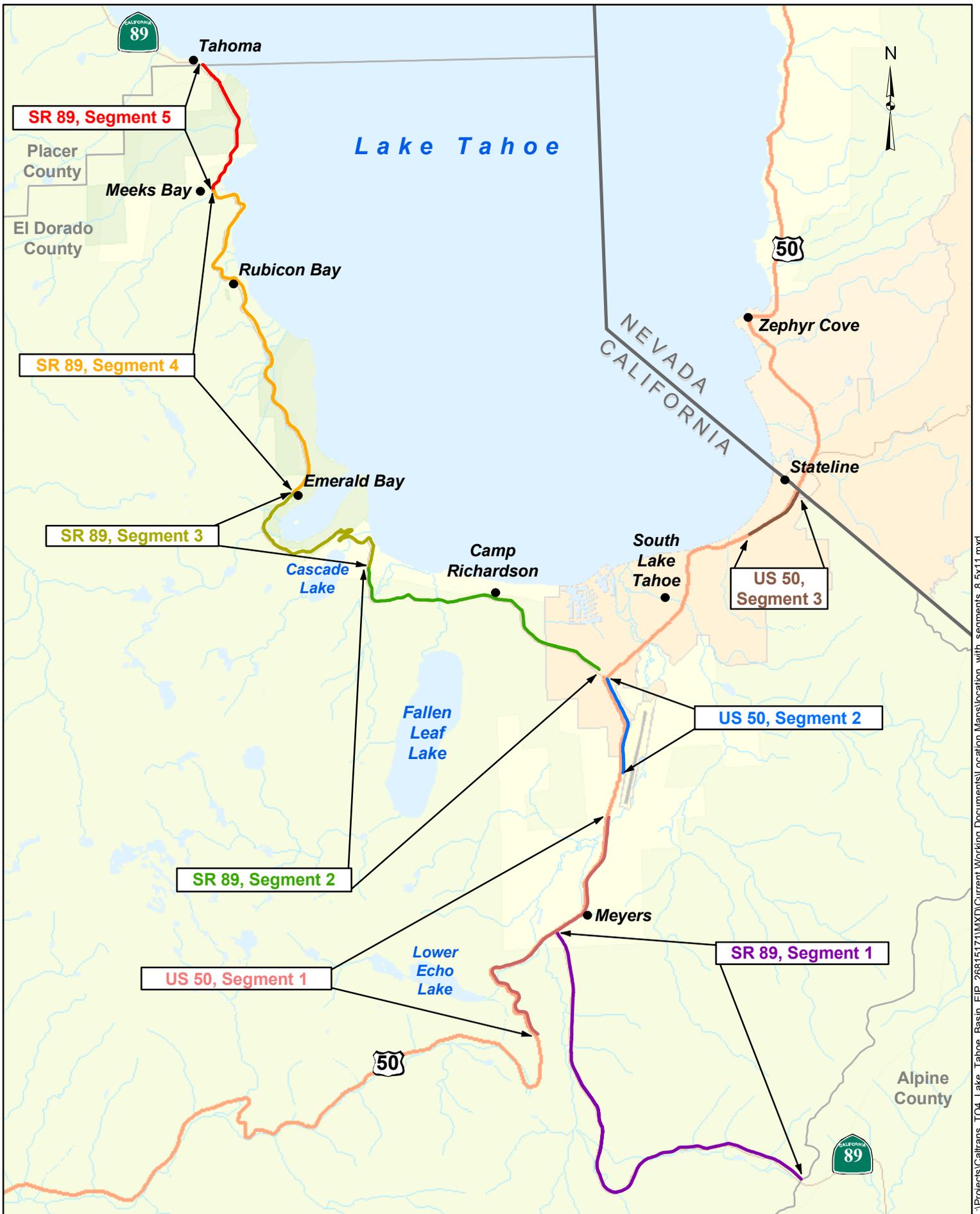
- **Segment 1: Old Meyers Road to 0.1 kilometer (km) (0.6 mile) east of Incline Road (Kilometer Post [KP] 108.8 to 117.3 or Post Mile [PM] 67.6 to 72.9).** This segment begins north of and below Echo Summit as the highway approaches the community of Meyers. It passes through steep terrain at its southern extent, transitioning to gentle slopes through the development at Meyers.

- **Segment 2: Airport Road to the US 50/SR 89 “Y”¹ intersection (KP 118.6 to 121.3 or PM 73.7 to 75.4).** This segment of US 50 is relatively flat. Lands along this segment are primarily divided into individual private parcels, both developed and undeveloped. The South Lake Tahoe airport is adjacent to this segment.
- **Segment 3: Ski Run Boulevard to the Nevada State Line (KP 127.6 to 129.4 or PM 79.3 to 80.4).** US 50 is increasingly developed approaching Stateline, Nevada. Within the overall Program, this segment contains the greatest proportion of development alongside the highway, including relatively extensive paved parking and roadway surfaces. Traffic use is relatively high.

On SR 89, the Program is defined in five segments:

- **Segment 1: Alpine County line to the US 50/SR 89 Intersection at Meyers (KP 0.0 to 15.76 or PM 0.0 to 8.6).** This segment of SR 89 begins at Luther Pass and descends steeply along the meadows and waterbody of Grass Lake and forested areas, to the more gradual topography at the community of Meyers and the intersection of US 50. This segment has relatively lower traffic volumes compared to other segments, but it provides important access from Meyers and South Lake Tahoe to areas past Luther Pass including Hope Valley, SR 88, and destinations outside of the Lake Tahoe Basin.
- **Segment 2: US 50/SR 89 “Y” in South Lake Tahoe to Cascade Road (KP 13.76 to 22.21 or PM 8.6 to 13.8).** This segment of SR 89 provides access to and from the South Lake Tahoe community and adjacent recreational beaches and parklands. It is generally flat within the developed city of South Lake Tahoe, the recreational and historic facilities at Camp Richardson, and the meadows and forestlands west of South Lake Tahoe. The highway provides connections to Fallen Leaf Lake and transitions to steeper slopes where it approaches Cascade Road (south of Cascade Lake). This segment has relatively higher traffic volumes and probably the greatest recreational use.
- **Segment 3: Cascade Road to north of the Eagle Falls Sidehill Viaducts (KP 22.21 to 28.97 or PM 13.8 to 18.0).** Traveling from the south, this segment of SR 89 climbs through switchbacks toward Emerald Bay and is cut into the steep, relatively unstable side slopes above the bay. Drivers can access pullovers and scenic vista points, trailheads (including to Desolation Wilderness), and the State Park facilities at Emerald Bay and the popular Vikingsholm historic home. The highway and parking areas have historic rock walls and bridges. The steep slopes on this segment limit the available area along both sides of the highway.
- **Segment 4: North of the Eagle Falls Sidehill Viaducts to Meeks Creek (KP 28.97 to 39.80 or PM 18.0 to 24.9).** This segment descends from Emerald Bay and travels north to the community of Meeks Bay. The southern half of this segment travels through undeveloped National Forest lands and is adjacent to or crosses through the northern extent of Emerald Bay State Park and D.L. Bliss State Park.

¹ The intersection of US 50 and SR 89 in South Lake Tahoe is commonly referred to as the “Y.”



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- **Segment 5: Meeks Creek to the Placer County Line (KP 39.80 to 44.1 or PM 24.9 to 27.4).** The northern and southern ends of this segment travel near or above the shoreline of Lake Tahoe, through the residential land uses at Meeks Bay and Tahoma. Between these two communities, the segment crosses through Sugar Pine State Park. Terrain is moderate and existing community development within Meeks Bay and Tahoma restricts availability of right-of-way in some areas.

1.3 PURPOSE

The purpose of the Program is to implement NPDES requirements and elements of the Lake Tahoe Basin EIP that relate to US 50 and SR 89 within the designated segments. In meeting this purpose, the Program will apply current design standards.

1.4 NEED FOR THE PROPOSED IMPROVEMENTS

1.4.1 Tahoe Regional Planning Agency

The Tahoe Regional Planning Agency (TRPA) was created with the authority to plan, oversee, and regulate development within the bi-state Tahoe region, which includes the state highways. Environmental threshold carrying capacities were established for Lake Tahoe by Public Law 96-551 and adopted for the Lake Tahoe Region in 1982. The Tahoe Regional Planning Compact charges the TRPA with attaining and maintaining these environmental threshold carrying capacities to protect the unique values of the Lake Tahoe Basin. The nine categories of environmental thresholds are as follows:

- Water Quality
- Wildlife
- Vegetation
- Soil Conservation
- Fisheries
- Noise
- Recreation
- Air Quality/Transportation
- Scenic Resources/Community Design

The TRPA's *Regional Plan for the Lake Tahoe Basin: Goals and Policies* (TRPA 2004) establishes the overall approach to meeting the threshold standards. Various elements of the Regional Plan address specific environmental and planning topics, and the TRPA's Plan Area Statements and Community Plans identify goals for specific land use areas throughout the Tahoe Basin. The plans and policies are ultimately implemented through the TRPA's Code of Ordinances, which regulates all proposed projects and activities.

1.4.2 Executive Order and State and Regional Commitments

Presidential Executive Order 13057, issued on July 26, 1997, declared the Lake Tahoe Region an area of national environmental concern. Executive Order 13057 created a federal partnership of five cabinet-level agency secretaries and called for a Memorandum of Agreement between the federal partnership, the States of California and Nevada, the TRPA, and the Washoe Tribal Government to facilitate coordination and cooperation. The Memorandum of Agreement was

subsequently signed by the Governor of California, and it affirmed a commitment to manage and protect Lake Tahoe's natural resources; to achieve and maintain the previous environmental thresholds; and to adopt, fund, and implement the EIP. The \$908 million EIP was adopted by the TRPA in February 1998. Continued state funding for the EIP since 1999 reaffirms California's commitment to protecting and restoring the environmental quality of Lake Tahoe.

The EIP identifies restoration, capital improvement, and operational modification work in eight of the nine environmental threshold areas. Approximately 83 EIP projects involve California highways in the Tahoe Basin. Caltrans has capital funding involvement with approximately 28 projects and is the lead agency for 20 projects. The Program incorporates elements of four EIP projects: EIP numbers 794, 993, 995, and 1012.

1.4.3 National Pollutant Discharge Elimination System Permit Requirements

In 1987, the Clean Water Act (CWA) was amended to include Section 402(p), which stated that stormwater discharges are point-source discharges and established a framework for regulating municipal and industrial stormwater discharges under the NPDES. Caltrans was issued a statewide NPDES permit (Order No. 99-06-DWQ, NPDES No. CAS000003; Statewide Permit) from the State Water Resources Control Board (SWRCB) on July 15, 1999. The Statewide Permit incorporates the provisions of the Water Quality Control Plan for the Lahontan Region (Basin Plan), which contains additional requirements that have historically applied to Caltrans permits. The Basin Plan includes numerical effluent limitations for stormwater discharges within the Lake Tahoe Hydrologic Unit.

The Statewide Permit requires that stormwater/urban runoff collection, treatment, and/or infiltration disposal facilities be designed, installed, and maintained for the discharge of stormwater runoff from all impervious surfaces generated by the 20-year, 1-hour design storm within the Lake Tahoe Hydrologic Unit. According to the permit, all Caltrans facilities within the Lake Tahoe Hydrologic Unit must be retrofitted to comply with this requirement by 2008. If site conditions do not allow for adequate on-site disposal, all site runoff must be treated to meet applicable Effluent Limits and/or Receiving Water Limitations specified in the Basin Plan. The Regional Water Quality Control Board (RWQCB) Executive Officer may approve alternative mitigation measures.

Caltrans developed and the SWRCB approved a Storm Water Management Plan that identifies appropriate Best Management Practices (BMPs) to be implemented on projects as site conditions allow. The *Storm Water Quality Handbooks: Project Planning and Design Guide* (Caltrans 2003b) was developed to give additional guidance to designers in considering and implementing these BMPs on all projects. The Program would improve stormwater quality by implementing source control and treatment BMPs as approved in the *Storm Water Quality Handbooks: Project Planning and Design Guide*. Source controls include, but are not limited to, preservation of existing vegetation, use of flow conveyance systems, and slope/surface protection systems (vegetated and hard surfaces). Treatment controls to be considered include, but are not limited to, infiltration basins, detention basins, sand traps and vaults, and biofiltration strips and swales. Additional drainage systems will be constructed as part of the Program to augment these BMPs.

This section describes the proposed Program improvements and how they would be implemented. The No Project alternative is also described.

2.1 PROPOSED PROGRAM

The proposed stormwater control, treatment, and roadway improvements are described as an overall Program consisting of eight highway segments. The Program is considered the preferred alternative. The Program proposes to comply with the NPDES permit requirements and to improve stormwater quality by collecting and treating the stormwater runoff from the highway by implementing the following improvements where feasible and warranted:

- Widen roadway shoulders to 1.2 meters (4 feet) minimum with asphalt-concrete (AC) dikes to convey stormwater runoff and better accommodate cyclists and pedestrians.
- Construct retaining walls where required to facilitate shoulder widening
- Pave some existing unsurfaced pullouts
- Rehabilitate existing and install new drainage systems (including stormwater basins and water conveyance systems)
- Install traction sand traps
- Provide rock slope protection
- Flatten and protect erodible slopes for erosion control
- Revegetate bare or erodible areas
- Where permitted by the RWQCB, allow sheet flow off of roadways where longitudinal basins are proposed, and allow spreading of runoff water where feasible in Stream Environment Zone (SEZ) areas.
- Pave all existing driveway connections within state right-of-way
- Place AC overlay (45 millimeters [mm] [1.8 inches])
- Dig out failed pavement sections prior to overlay

In addition, the Program would provide pavement cross-slope correction along US 50 Segment 3, which may include reconstruction of entire roadway structural sections.

Conceptual locations for potential infiltration basins were identified during the development of the Project Study Reports for US 50 and SR 89. The Program improvements were developed with input and coordination among Caltrans multifunctional units specializing in design, materials, traffic, constructability, safety, and environmental review. Preliminary design review and input was provided by staff from the Lahontan RWQCB, the TRPA, El Dorado County, the Caltrans TRPA Coordinator, and the Caltrans District 3 Landscape and Design units who conducted field reviews of the US 50 and SR 89 segments. Appendix B summarizes the initial feasibility assessment and comments.

The basin and related facility locations and configurations were developed based on whether a site was undeveloped, had flat or gently sloping topography, was downgradient from an existing or potential discharge point, was not in an obvious SEZ or floodplain, and was accessible by

maintenance equipment. To accommodate flexibility in the planning and design of the proposed facilities, a broad study area was defined that encompassed most of the anticipated improvements. This study area is shown on the figures in Appendix A.

2.1.1 Design, Right-of-Way Acquisition, and Construction

The proposed Program elements discussed and described in this Program EIR are considered preliminary. Program design and construction will proceed in segments, described in Section 1.2. As each segment is advanced for funding, additional design work will be completed, ultimately leading to development of Plans, Specifications and Estimates (PS&E). Where basins and other facilities are proposed that are outside of the existing state right-of-way, portions of parcels or entire parcels may be required as new right-of-way for drainage easements. The right-of-way phase will identify the necessary parcels, and established right-of-way easement and property acquisition procedures will be followed. At the time of preparation of this program EIR, only conceptual, proposed facilities and a study area have been identified. Further development of the design together with environmental and public review will be completed for each segment.

Construction activities will require clearing of vegetation where facilities will be installed. Tree removal can be minimized through further refinement of basin and facility design but will be necessary in some locations. State, regional, and local vegetation and tree removal requirements and permitting will be followed. Erosion control measures and plans will be developed and required of the contractor during construction, and seasonal restrictions applicable to projects in the Tahoe Basin will be followed. As noted previously, as specific projects and segments advance in planning and design beyond this program EIR, additional review will be performed as necessary.

Construction will include the removal and replacement of existing pavement and the installation of new paved areas along the highways. Any widening of the roadway might require extensive earthwork and disturbance of existing slopes. New cutslopes will be stabilized with rock-slope protection and/or vegetation. TRPA scenic threshold criteria will be considered in the design of the slope protection systems. Excavation and earthwork will be necessary for the installation of pavement, retaining walls or soil-nail walls, runoff basins, water collection and control devices, and similar facilities. Excavated earth and materials not reused at project sites or elsewhere will be disposed of by the contractors at appropriate disposal facilities. The contractors may have to use controlled blasting at locations where existing rock prevents or substantially impairs excavation. Permanent, long-term Best Management Practices (BMPs), including asphalt dikes and new drainage systems, will be implemented for controlling the potential impacts to existing waterways or storm drainage facilities.

2.1.2 Traffic Management and Controls

2.1.2.1 Construction Traffic and Traffic Management Plan

Restrictions on traffic, including one-way lane closures and temporary road closures, would be required to construct some of the improvements. Lane and road closures would be needed where work would be performed within or close to traffic lanes. Closures would also be needed to provide access and work areas sufficient to accelerate work schedules and allow completion of

the proposed improvements within the limited seasonal work periods allowed in the Tahoe Basin.

A Traffic Management Plan (TMP) would be developed as part of the final design phase of each project. The TMP would include construction restrictions that meet the requirements for work planned in the Tahoe Basin. The TMP may include installing Traffic Operations Systems to provide current construction, traffic, and detour information; developing a master construction schedule to ensure minimal traffic disruption; coordinating with local and state agencies to minimize conflicting construction operations; and staging/sizing contractor construction efforts to stabilize the total workforce on the roads at any time. An additional measure includes restricting lane closures in the Basin from July 1 through Labor Day with no lane closures allowed from Friday after noon through Sunday. Lane closure charts would be developed as part of the TMP to address the restrictions and planned closures. Work off of the highway that does not impact traffic flow would be allowed within the work window mentioned above.

Table 2-1 summarizes preliminary construction traffic management requirements, which would be refined as each project segment is designed. The potential lane closures, changes, and timing described are representative of the possible construction changes and are therefore preliminary and approximate. It is important to note that construction activities would be transient within each segment, meaning that, at any one location, construction may be completed well within the time frames noted below and the work crews and equipment would move to another location as work proceeds within a highway segment.

2.1.3 Right-of-Way Requirements

New right-of-way would be required where some facilities are proposed that are outside of the existing state right-of-way for US 50 and SR 89. New right-of-way would be needed for the proposed basins, shoulder widening, and utility relocation, among other needs. The following preliminary right-of-way requirements are anticipated:

- US 50: 32 parcels
- SR 89: 174 parcels

To allow for construction, temporary access to or use of lands outside of the permanent right-of-way would be required. This is typical of most major roadway projects and would allow for temporary staging of equipment and construction, and access to and from the construction areas. Construction easements would be defined during PS&E preparation for each project. The study area for the Program extends along both sides of US 50 and SR 89 and was defined to allow room for construction access and activities where easements would ultimately be obtained.

2.1.4 Culverts, Retaining Walls, and Slope Protection

Culverts in poor condition will be lined or replaced. Retaining walls might be constructed at various locations, primarily to allow for widening of shoulders and pullouts and/or installation of drainage facilities. Soil nail walls² would also be used as a construction alternative to retaining

² Soil nailing is a method of construction that reinforces existing ground or an excavated cut by installing “nails” or anchors into the cut to provide reinforcement. The face of the cut is then treated or covered to prevent erosion.

walls. Where applicable, the use of soil nail walls can facilitate construction while reducing traffic and environmental impacts. Slope protection measures requiring new walls or other structures would be required to comply with TRPA’s aesthetics thresholds.

**Table 2-1
Conceptual Staged Construction Lane Closure Requirements**

US 50	
Segment 1	Old Meyers Road to east of Incline Road
Meyers Road to Chiapa Drive	Construction may be limited to daytime work with one lane closed (traffic is allowed use of the single lane in alternating directions under the control of flagmen and pilot cars, as necessary)
Chiapa Drive to Pioneer Trail Road	Use of existing left-turn lanes and wide shoulders may be possible to keep two-way traffic open during construction.
Pioneer Trail Road to east of Incline Road	Temporary one-way traffic control will likely be required.
US 50 Segment 1 construction time: Overall construction time within this segment is estimated to require three to four construction seasons.	
Segment 2	Airport Road to the US 50/SR 89 “Y”
Airport Road to “E” Street	One-way traffic control will be required.
“E” Street to US 50/SR 89 “Y”	Four-lane highway, which may allow two-way traffic to be maintained with some lane closures and traffic management.
US 50 Segment 2 construction time: One-construction season for the overall segment.	
Segment 3	Ski Run Boulevard to the Nevada State Line
Entire segment	Segment 3 has four lanes with a continuous left-turn lane. Two-way traffic can be maintained with some lane closures.
US 50 Segment 3 construction time: Two construction seasons for the overall segment.	
SR 89	
Segments 1, 2, 4, and 5	Alpine County line to the US 50/SR 89 Intersection, US 50/SR 89 “Y” to Cascade Road, and North of the Eagle Falls Sidehill Viaducts to the Placer County Line
Entire segments	Except for within South Lake Tahoe, these segments generally consist of one lane in each direction, with varying shoulder widths. Construction will be limited to daytime with one-way traffic control with the use of flagmen. Use of pilot cars may be required at various locations along these segments. Where left-turn lanes and wide shoulders allow, two-way traffic flow will be managed.
SR 89 Segments 1, 2, 4 and 5: Construction is estimated to take three to four seasons overall	
Segment 3	Cascade Road to North of the Eagle Falls Sidehill Viaducts
Entire segment	One-way traffic control will be required with the possibility of longer periods of lane closures.
SR 89 Segment 3 construction time: Estimated to take about two to three seasons	

2.1.5 Utilities

Utility relocations may be required for construction of the proposed facilities. This could include relocation of aboveground or belowground utilities outside of a widened roadway shoulder or right-of-way. The study area for the Program includes areas outside of the roadway and right-of-way, and although the specific needs for any utility relocation would not be defined until the final design of each segment, the relocations are expected to be within the areas evaluated in this

report. This will be verified during the final design, and any further environmental review will be performed as necessary for each specific project.

2.2 NO PROJECT ALTERNATIVE

The No Project Alternative would consist of not implementing the EIP projects for which Caltrans is the lead agency. Caltrans would construct none of the improvements listed in Section 2.1. Caltrans is required to comply with the Statewide NPDES permit issued by SWRCB and would be in violation of the requirements of this permit if the proposed Program is not constructed.

The No Project Alternative would result in failure to meet the Program purpose. This alternative would not address the environmental problems facing the Lake Tahoe Basin, and therefore is not considered a viable alternative with respect to the purpose and need.

The No Project Alternative would not directly impact the resources discussed in this report, including biological and cultural resources and parklands.

2.3 NECESSARY APPROVALS AND PERMITS

2.3.1 California Environmental Quality Act and National Environmental Policy Act

This program EIR addresses the planned improvements within Segments 1 through 3 on US 50 and Segments 1 through 5 on SR 89. As segments are advanced for further consideration, they would be reviewed based on site-specific design work and timing of construction. For a specific project, Caltrans may propose mitigation measures consistent with this EIR to reduce impacts to subsequent levels that are less than significant. If necessary, the project segments may be subject to follow-up environmental review consistent with CEQA. If federal approval or involvement is necessary (such as federal funding allocated through the Federal Highway Administration [FHWA]), the segments may require environmental review consistent with the National Environmental Policy Act (NEPA) and the U.S. Department of Transportation Section 4(f) requirements.

2.3.2 Permits and Approvals

Permits would be required from local, state, and federal agencies depending on the jurisdiction of each agency with respect to each specific project that is advanced for review. The following agencies may require permits, approvals, or review:

- U.S. Army Corps of Engineers (USACE) (Section 404 permit)
- U.S. Fish and Wildlife Service (USFWS) (Section 7 consultation)
- State Historic Preservation Officer (SHPO)
- Forest Service, Lake Tahoe Basin Management Unit (encroachment permit)
- California Department of Fish and Game (CDFG) (Section 1602 permit/Streambed Alteration)
- SWRCB and RWQCB (Section 401 permit/NPDES)

- TRPA
- California State Parks (encroachment permit)
- El Dorado County
- City of South Lake Tahoe

2.4 AREAS OF KNOWN CONTROVERSY

The proposed Program would be beneficial to water quality but would require new right-of-way along the highways, which would impact existing public and private landowners. All property acquisition would follow state law and established guidelines. As part of state and federal procedures, Caltrans would appraise properties needed for right-of-way and make offers to landowners to acquire the rights and follow eminent domain guidelines to both construct and maintain new permanent drainage and roadway improvements.

Construction would take place along and within the existing highways, which would temporarily cause traffic delays and disrupt existing parking availability along the shoulders, and may lead to the permanent loss of parking in some areas. Mitigation in the form of public information and notification about construction activities would be provided to allow drivers to anticipate delays and disruption and to plan accordingly. However, some level of delays would be unavoidable depending on the location and type of work required.

New drainage facilities and roadway improvements would affect existing vegetation and the visual setting. Detention basins, slope protection, and drainage facilities would be designed and constructed to blend in with the surroundings.