

C.13 Traffic and Transportation

This section addresses traffic and transportation issues and impacts related to the proposed Project and alternatives. Section C.13.1 provides a description of the affected environment, and the applicable regulatory environment is described in Section C.13.2. Significance criteria and APMs are discussed in Sections C.13-3 and C.13-4. Analyses of the proposed Project’s and alternatives’ impacts are presented in Sections C.13.5 through C.13.12, and the cumulative effects of the proposed Project and alternatives are described in Section C.13.14.

C.13.1 Affected Environment

C.13.1.1 Existing Roadway Network

Figures B.2-2a through B.2-2e illustrate the study area roadway network and the proposed transmission line route and substation locations. There are a number of roadway segments that would be directly or indirectly affected by construction of the proposed Project. The major roadways in the Lancaster area, Angeles National Forest (ANF), and the Santa Clarita area that would be potentially affected by construction of the proposed Project are described below. There are also a number of other smaller roads including access roads and spurs within the ANF as well as private roads in the general area that would be crossed by or in the near vicinity of the proposed transmission line route.

Lancaster Area

The northern end of the proposed Project route is located in the western portion of the City of Lancaster and in unincorporated Los Angeles County. The nearest State Route in the Lancaster area to the proposed transmission line route is State Route 14 (SR-14), which is located approximately 7.5 miles east of Antelope Substation. SR-14 experiences an annual average daily traffic (ADT) level of approximately 40,500 trips in the area (Caltrans, 2005a). Between the Antelope Substation and its entrance to the ANF, the proposed route would cross or come close to at least six public roadways under the jurisdiction of the City of Lancaster or Los Angeles County. Figure C.13-1 illustrates the locations at which the proposed Project and alternatives would cross local roads. Three of the six roads (i.e., 100th Street W, West Avenue K, and Elizabeth Lake Road) serve as collectors and allow travel between Lancaster and other communities. Table C.13-1 presents the public roadways that would either be crossed or come close to the proposed Project route in the Lancaster area. The table also presents the jurisdiction, number of lanes, the route milepost (Mile) closest to the road and the orientation of the road to the proposed Project route.

Roadway	Jurisdiction	Description	Route Mile	Orientation to Route
100 th Street W	City of Lancaster	2 lanes	0.8	Overhead Crossing
West Ave. K	City of Lancaster	2 lanes	1.7	Overhead Crossing
110 th Street W	City of Lancaster	2 lanes	2.6	Overhead Crossing
Johnson Road	City of Lancaster	2 lanes	2.6	Comes Close to
Northside Drive	Los Angeles County	2 lanes	4.2	Overhead Crossing
Elizabeth Lake Road	Los Angeles County	2 lanes	4.7	Overhead Crossing

Source: SCE, 2004.

Figure C.13-1. Traffic Map for Lancaster/Palmdale

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The City of Lancaster does not collect ADT data for City roads that would be crossed by the proposed transmission line because traffic congestion in the area is not a concern due to existing low traffic levels (Lancaster, 2005). Elizabeth Lake Road (County Route N2) has an ADT of 5,910 trips in the area near the proposed route (Los Angeles County, 2005a). Trip information for Northside Drive is not available.

Angeles National Forest

The proposed Project route would enter the National Forest Services (NFS) lands at route Mile 5.7 and exit NFS lands at Mile 18.6. Within the ANF, the proposed route follows an existing 66-kV transmission line within the designated Utility Corridor through the ANF, which is accessed by small maintenance trails or spur roads from Forest System roads. The relatively larger roadways within the ANF that would be crossed by, or in the vicinity of, the proposed transmission line route are summarized below in Table C.13-2. There are no State roadways in the immediate vicinity of the proposed route in the ANF (see Figure C.13-2). The Leona Divide Fire Road (6N04) is one of the better maintained roads within the ANF. Spunky Canyon Road (6N09) is an important connector road between the Green Valley residential area, Spunky Canyon Campground, and Bouquet Canyon Road to the southeast. Bouquet Canyon Reservoir Road and Del Sur Ridge Road both provide access to the western area of Bouquet Reservoir and would be traveled by construction-related traffic. Del Sur Ridge Road is similar to the Leona Divide Fire Road in that it is wider and generally better graded than other Forest System roads in the ANF project area. Del Sur Ridge Road provides access from the west end of Bouquet Reservoir, down to Haskell Canyon Road at the southern boundary of the ANF. Del Sur Ridge Road is used by Bouquet Canyon Stone Company, Inc. for hauling stone from its quarry, located off the road near Mile 13.4. The Forest Service does not maintain ADT data for the roads listed in Table C.13-2 (USDA, 2005). According to the Los Angeles County Department of Public Works, Spunky Canyon Road experiences an ADT of 207 trips (LADPW 2006).

Roadway	Jurisdiction	Description	Route Mile	Orientation to Route
Leona Divide Fire Road (6N04)*	Forest Service	2 lane (dirt)	6.4	Overhead Crossing
Spunky Edison Fire Road (6N09)	Forest Service	narrow 2 lane (dirt)	7.4	Overhead Crossing
Spunky Canyon Road (6N09)	Los Angeles County	2 lane	8.6	Overhead Crossing
Bouquet Canyon Reservoir Road (6N14)	Forest Service	2 lane (dirt)	9.2	Overhead Crossing
Del Sur Ridge Road (6N18)*	Forest Service	narrow 2 lane (dirt)	9.8	Overhead Crossing
Del Sur Ridge Road (6N18)*	Forest Service	2 lane (dirt)	11.2-11.7	Parallel with
Del Sur Ridge Road (6N18)*	Forest Service	2 lane (dirt)	12.4	Overhead Crossing
Del Sur Ridge Road (6N18)*	Forest Service	2 lane (dirt)	14.3-15.0	Parallel with
Del Sur Ridge Road (6N18)*	Forest Service	2 lane (dirt)	16-16.5	Parallel with
Coarse Gold Mountainway (5N24)*	Forest Service	2 lane (dirt)	NA	Route Access
Pettinger Canyon Road(5N28)	Forest Service	2 lane (dirt)	18.7-19.4	Parallel With
Del Sur Ridge Road (6N18)	Forest Service	2 lane (dirt)	18.7-19.4	Parallel With

*Off Highway Vehicle (OHV) Road

Sources: Los Angeles County DPW 2006, SCE 2004 and USDA 2005.

Santa Clarita Area

The proposed Project route would not cross or be in the immediate vicinity of any State routes or highways in the Santa Clarita area. The nearest State routes in the Santa Clarita area are Interstate Highway 5 (I-5) and State Route 126 (SR-126) (see Figure C.13-3). I-5 is located approximately 0.5 mile east of Pardee Substation and

Figure C.13-2. Traffic Map for Angeles National Forest

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Figure C.13-3. Traffic Map for Santa Clarita

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has an annual ADT rate of 120,000 (Caltrans, 2005a). SR-126 is located approximately 1.3 miles west-northwest of the Pardee Substation and has an annual ADT rate of 33,500 (Caltrans, 2005a). Table C.13-3 provides information about the majority of the roads in the Santa Clarita area that would be crossed by or in the vicinity of the proposed transmission line route.

Roadway	Jurisdiction	Description	ADT*	Route Mile	Orientation to Route
Saugus Del Sur Road	Private	2 lanes (dirt)	NA	19.4	Overhead Crossing
Highline/Haskell Canyon Rd.	Los Angeles Co.	2 lanes (dirt)	NA	20.6	Overhead Crossing
North Rock Canyon Drive	Los Angeles Co.	2 lanes	NA	21.1	Overhead Crossing
Garnet Canyon Drive	Los Angeles Co.	2 lanes	1,486	21.6	Overhead Crossing
Tamarack Lane	City of Santa Clarita	2 lanes	NA	21.9	Overhead Crossing
Seco Canyon Road	City of Santa Clarita	2 lanes	10,300	22.2	Overhead Crossing
San Francisquito Canyon Rd.	Los Angeles Co.	2 lanes	5,497	22.9	Overhead Crossing
Copper Hill Drive (at San Francisquito Canyon Road)	Los Angeles Co.	4 lanes	31,168	23.0	Overhead Crossing
McBean Parkway	Los Angeles Co.	4 lanes	16,233	23.3	Overhead Crossing
Copper Hill Drive (near Copperstone Drive)	City of Santa Clarita	4 lanes	12,350	24.6	Overhead Crossing
Kelly Johnson Parkway	City of Santa Clarita	2 lanes	NA	24.9	Overhead Crossing
Rye Canyon Road	City of Santa Clarita	2 lanes	NA	25.3	Overhead Crossing
Brady Parkway	City of Santa Clarita	2 lanes	NA	25.4	Overhead Crossing

Sources: SCE, 2004; Los Angeles County, 2005a; Santa Clarita, 2005a; USDA, 2005; and Santa Clarita, 2005b.

*The majority of the presented traffic counts for Los Angeles County were collected in 2004; the counts for San Francisquito Canyon Road are from 2003. The counts for Santa Clarita roads were collected in 2000. NA= not available

C.13.1.2 Transit and Rail Service

In the Lancaster area, local and commuter bus service is provided by the Antelope Valley Transit Authority (AVTA). AVTA operates 12 local routes throughout the City of Lancaster and between Lancaster and nearby communities and three commuter routes to the Los Angeles area. All of the operations of the AVTA are to the east of the proposed transmission line route (AVTA, 2005).

The Santa Clarita Transit (SCT) provides bus service to the City of Santa Clarita, other nearby cities, and unincorporated areas (SCT, 2005). Several SCT bus routes would be crossed by the proposed transmission line. In addition to SCT bus routes, several traditional school bus routes used by Saugus Union School District schools would be crossed by the proposed Project route. The specific bus routes that would cross the proposed transmission line route are summarized in Table C.13-4.

The proposed transmission line would not cross or be in the vicinity of any transit or freight rail line in the proposed area (Amtrak, 2005 and LA County, 2005).

Table C.13-4. Bus Services that Cross the Proposed Route		
SCT Route	Street Crossing	Route Mile
3 (Saugus to Six Flags)	Tamarack Lane and Seco Canyon Road	21.9 and 22.2
7 (Saugus to Six Flags)	Tamarack Lane, Seco Canyon Road, Copper Hill Road, and McBean Parkway.	21.9, 22.2, 24.5, 23.1, and 23.4.
503 (Tamarack to SC Metrolink Station)	Tamarack Lane and Seco Canyon Road	21.9 and 22.2
Traditional School Bus Routes	Tamarack Lane, Seco Canyon Road, Copper Hill Road, and McBean Parkway.	21.9, 22.2, 24.5, 23.1, and 23.4.

Source: SCT, 2005.

C.13.1.3 Bicycle Facilities

Many of the roadways in the Project area have either designated bicycle lanes or wide shoulders for safe bicycle transportation. In addition, there are several bicycle routes and paths throughout the Project area that are off limits to motor vehicles. A complete discussion of these facilities is included in Section C.9, Recreation.

C.13.1.4 Air Transportation

The General William J. Fox Airfield (Fox Airfield) is located approximately 1.5 miles northeast of the Antelope Substation. The Fox Airfield is a general use public airport owned by Los Angeles County, and operated under contract by American Airports Corporation (GA News, 2005). The Fox Airfield averages nearly 200 aircraft operations per day, including 50 percent local aviation, 47 percent transient general aviation, 2 percent air taxi, and 1 percent military operations (WJF, 2005). In addition to the Fox Airfield, a small private landing strip is located approximately 3 miles southeast of the Antelope Substation.

C.13.2 Regulatory Framework

Construction of the Antelope-Pardee 500-kV Transmission Project could potentially affect transportation ROWs, access, traffic flow, and parking on public streets and highways. Therefore, it would be necessary for the Applicant and/or the construction contractor to obtain encroachment permits or similar legal agreements from the public agencies responsible for each affected roadway or other transportation ROW. Such permits are needed for ROWs that would be crossed by the transmission line as well as for where transmission line construction activities would require the use of a public ROW for a parallel installation. Depending on which route is approved, these encroachment permits would be issued by Caltrans, County of Los Angeles, the City of Lancaster, and/or the City of Santa Clarita. In addition, as part of the overall Special Use application process, the Applicant would be required to obtain approval for any maintenance of USDA Forest System roads or construction and/or maintenance on non-Forest System Roads on NFS lands.

The Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) is a long term vision document that outlines transportation goals, objectives, and policies for the SCAG region. The SCAG RTP includes an assessment of overall growth and economic trends in the region and provides strategic direction for transportation capital investments. The Los Angeles County Metropolitan Transit Authority (LACMTA) prepared the North County Combined Highway Corridors Study to address short-term and long term requirements to accommodate projected transportation needs in North Los Angeles County. Projects implemented in the areas addressed by these plans must be consistent with the policies and objectives of these plans.

Impacts to aviation activities could occur during both construction and operation of a transmission line project because aviation impacts are caused by physical impediments to the navigable airspace. According to the

guidelines of the Federal Aviation Administration (FAA), construction of a project could potentially have a significant impact on aviation activities if a structure or any equipment is positioned such that it would be more than 200 feet above the ground or if an object would penetrate the imaginary surface extending outward and upward from a public or military airport runway or a helipad. The Project, including all helicopter construction activities, would be required to comply with all appropriate regulations of the FAA and to coordinate forest related construction activities with Forest Service Dispatch.

C.13.3 Significance Criteria

The traffic/transportation significance criteria are based on the CEQA checklist in Appendix G of the CEQA Guidelines and a review of the environmental documentation for other utility projects in California subject to CEQA and/or NEPA review. Traffic and transportation impacts would be significant if one or more of the following conditions result from construction:

- Criterion TRA1: A major roadway (arterial or collector classification) would be closed to through traffic as a result of construction activities and there would be no suitable alternative route available; or the installation of the transmission line within, adjacent to, or across a roadway would reduce the number of, or the available width of, one or more travel lanes during the peak traffic periods, resulting in a temporary substantial disruption to traffic flow and/or substantial increased traffic congestion.
- Criterion TRA2: An increase in vehicle trips associated with construction workers or equipment would result in an unacceptable reduction in level of service on the roadways in the project vicinity.
- Criterion TRA3: Construction activities would temporarily restrict access to or from adjacent land uses and there would be no suitable alternative access.
- Criterion TRA4: Construction activities or operations would restrict the movements of emergency vehicles (police cars, fire trucks, ambulances, paramedic units) and there would be no reasonable alternative access routes available.
- Criterion TRA5: Construction activities would disrupt bus transit service and there would be no suitable alternative routes or stops.
- Criterion TRA6: Construction activities within, adjacent to, or across a railroad right-of-way would result in a temporary disruption of rail traffic.
- Criterion TRA7: Construction activities would impede pedestrian movements or bike trails in the construction area and there would be no suitable alternative pedestrian/bicycle access routes.
- Criterion TRA8: Construction activities or staging activities would increase the demand for and/or reduce the supply of parking spaces and there would be no provisions for accommodating the resulting parking deficiencies.
- Criterion TRA9: Construction activities would conflict with planned transportation projects in the Project area.
- Criterion TRA10: An increase in roadway wear in the vicinity of the construction zone would occur as a result of heavy truck or construction equipment movements, resulting in noticeable deterioration of a roadway surface or other features in the road ROW.
- Criterion TRA11: A project structure, crane, or wires were to be positioned such that it could adversely affect aviation activities.
- Criterion TRA12: Construction should not be inconsistent with regional and local transportation plans

C.13.4 Applicant-Proposed Measures

SCE has committed to implementing the nine Applicant-Proposed Measures (APMs) presented in Table C.13-5 to reduce traffic and transportation impacts associated with construction of the Project. The APMs are considered part of the proposed Project and implementation of these measures would be monitored by the CPUC and/or Forest Service during construction if the proposed Project is approved.

Table C.13-5. Applicant-Proposed Measures - Transportation and Traffic	
Measure Number	SCE-Proposed Measure
APM TRA-1	Construction activities would be designed to minimize work on or use of local streets.
APM TRA-2	When local streets must be used for more than normal traffic purposes, an encroachment permit or similar authorization would be obtained from the County (or other agency, as applicable).
APM TRAc-3	Any construction or installation work requiring the crossing of a local street, highway, or rail line would incorporate the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity.
APM TRA-4	Any work requiring an encroachment permit would include preparation of a traffic control plan and other management plans to minimize effects on local streets.
APM TRA-5	Any damage to local streets would be repaired, and the street system would be restored.
APM TRA-6	To the extent practical, existing access roads would be used during construction, and any re-grading of access trails would be the minimum necessary to provide safe access, and erosion control.
APM TRA-7	Helicopter transport would be used for remote locations where roadway access is not feasible. Specific sites and the details of helicopter use would be determined in consultation with the USDA Forest Service.
APM TRA-8	Any damage to existing forest roads would be repaired.
APM TRA-9	The design and use of any new roadways and access trails within the ANF would be coordinated with the District and Forest Supervisor's office. The ANF may specify conditions under which use of the ANF roads and lands may be permitted. These conditions may include restoring or blocking access at some service trails, and repairing any roadway damage or erosion damage caused by construction activities or traffic.

Source: SCE, 2004.

C.13.5 Impact Analysis: Proposed Project/Action

Construction Overview

Construction of the proposed Project would include preparing and constructing access roads, marshalling yards, installing the new supporting structure foundations, removal of and/or relocating existing facilities, erecting new support structures, stringing of the new conductor, modifying Antelope and Pardee substations, and cleanup. Project construction activities are estimated to last for approximately 13 months. Approximately 40 separate construction crews, each comprised of between 2 to 10 workers, would work on the various aspects of the proposed Project. It is estimated that between 50 and 120 workers would commute to various locations along the proposed route ROW each workday.

Most of the proposed tower sites are accessible from existing access and spur roads. However, some tower sites would require the construction of new access roads or spurs. Many access roads within the ANF are not accessible by construction equipment due to disrepair, overgrown vegetation, and/or narrow configuration. Depending on their condition, existing access roads would be cleared of vegetation, re-graded, recompacted and possibly widened to provide a surface capable of supporting heavy equipment. Erosion control measures would be installed where appropriate. Construction equipment such as graders, back-hoes, and crawler tractors would need to be hauled to various portions of the proposed route for access road construction and reconstruction work. Bouquet Canyon Road, Spunky Canyon Road, and the existing Del Sur Ridge Road, as well as existing truck trails and unpaved roadways, would be used to access the designated Utility Corridor within the ANF during construction and maintenance for the Project. Helicopters would be used to transport equipment and materials to locations within the ANF where existing road access to tower sites is unavailable. During helicopter operations, road closures and traffic detours would be used to restrict public access to defined areas within the ANF.

For installation of new lattice and pole structures as well as the removal of the existing 66- and 500-kV structures, SCE estimates that approximately 50 to 60 haul trips would be required to deliver and remove

construction equipment (e.g., backhoes, crawlers, drill, front-end loader) and materials (e.g., concrete, rebar cages, lattice steel, etc.) to and from each of the proposed and existing tower sites. In addition, excavated soils would likely need to be hauled off site.

During wire-stringing activities, SCE proposes to install temporary structures referred to as guard poles at all road crossings to stop the downward motion of conductor wire should it drop below a conventional stringing height. The use of guard poles reduces traffic impacts at crossing locations. Guard poles would likely require the temporary closure of roads at crossing locations for their installation. In addition, the specific requirements of the applicable transportation agency may require other methods at crossing locations, including detouring all traffic off the roadway at the crossing location or implementing a controlled continuous traffic break while stringing operations are performed. The specific agency requirements would be included as stipulations in the required encroachment permits.

The Project would require a primary and several secondary marshalling yards to stage materials and equipment and to temporarily store materials associated with the removed 66- and 500-kV lines. The primary marshalling yard would be located adjacent to the Antelope Substation off Avenue J in Lancaster. The secondary marshalling yards would be located at various locations along the proposed ROW, which would not be located on NFS lands.

Closure of Roads to Through Traffic or Reduction of Travel Lanes (Criterion TRA1)

Impact T-1: Closure of roads to through traffic or reduction of travel lanes would result in substantial congestion.

Figures C.13-1 through C.13-3 show the roads that would be crossed by the proposed transmission line portion of the Project. Construction of the proposed Project would result in temporary road closures during transmission line stringing activities. There is also a possibility that traffic detours or implementation of controlled continuous traffic breaks may be required at these road crossing locations. In addition, SCE has indicated that during helicopter operations within the ANF, road closures and traffic detours would be implemented to restrict public access to defined areas within the ANF.

SCE has committed to APMs TRA-3, TRA-4, and TRA-7 (see Table C.13-5), which require encroachment permits or similar authorization to be obtained from the applicable jurisdictions when streets are used for more than normal traffic purposes, require the preparation of a traffic control plan for all work requiring a permit from a local jurisdiction, and require Forest Service consultation for details of helicopter use in the ANF. Temporary road closures could substantially disrupt traffic flow and substantially increase traffic congestion, resulting in significant impacts.

To ensure that the traffic control plans required under APM TRA-4 address temporary road and lane closures that would be required during construction of the proposed transmission line, Mitigation Measures T-1a and T-1b are proposed. These measures are proposed in addition to APMs TRA-3, TRA-4, and TRA-7 to ensure that potentially significant impacts associated with short-term lane and road closures during overhead construction are reduced to less-than-significant levels (**Class II**).

Mitigation Measures for Impact T-1

T-1a Prepare Traffic Control Plans. Prior to the start of construction, SCE shall submit Traffic Control Plans (TCPs) to all agencies with jurisdiction over public roads that would be affected by overhead construction activities as part of the required traffic encroachment permits. TCPs shall define the locations of all roads that would need to be temporarily closed due to construction activities,

including aerial hauling by helicopter and conductor stringing activities. The TCPs shall define the use of flag persons, warning signs, lights, barricades, cones, etc. to provide safe work areas and to warn, control, protect, and expedite vehicular and pedestrian traffic. The measures included in the TCP shall be consistent with the standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the Work Area Traffic Control Handbook (WATCH). Copies of the TCPs shall be sent to the responsible agencies for review. Tables C.13-1 through C.13-3 present the appropriate responsible jurisdictions for review of the TCPs.

TCPs shall also include measures to avoid disruptions or delays in access for emergency service vehicles and to keep emergency service agencies fully informed of road closures, detours, and delays. Police departments, fire departments, ambulance services, and paramedic services shall be notified at least one month in advance by SCE of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. Provisions shall be ready at all times to accommodate emergency vehicles, such as immediately stopping work for emergency vehicle passage, short detours, and alternate routes developed in conjunction with local agencies. TCPs shall also identify all emergency service agencies, include contact information for those agencies, assign responsibility for notifying the service providers, and specify coordination procedures. Copies of the TCPs shall be provided to all affected police departments, fire departments, ambulance and paramedic services. Documentation of coordination with service providers shall be provided to the CPUC prior to the start of construction.

T-1b Restrict Lane Closures. To mitigate traffic congestion and delays during construction, SCE shall restrict all necessary lane closures or obstructions on major roadways associated with overhead construction activities to off-peak periods only. Lane closures must not occur between the peak hours of 6:00 and 9:30 a.m. and between the peak hours of 3:30 and 6:30 p.m., or as directed in writing by the affected public agency in the encroachment permit.

Unacceptable Level of Service Reduction to Vicinity Roads (Criterion TRA2)

Impact T-2: Construction traffic would result in congestion on area roadways.

Construction of the proposed Project would generate additional traffic on regional and local roadways. Construction worker commute trips, Project equipment deliveries, and hauling materials such as support towers, concrete, conductor, and excavation spoils would increase existing traffic volumes in the Project area.

Workers commuting to construction sites would increase traffic in the Project area. It is estimated that the daily Project workforce would consist of 50 to 120 workers over a 13-month period. Transmission line workers would be dispersed in groups throughout the Project area and would not typically be working at the same place at any one time. Haul truck traffic would include trucks carrying equipment and materials, spoils for disposal, and new and old tower support pieces. Trips would be made to and from various points along the transmission line route. The exact routes and scheduling of truck trips are not known at this time.

The Project-related commute traffic and construction truck/equipment activity is expected to be dispersed over the entire Project area and dispersed over time. Although traffic volumes on study area roadways are generally low to moderate, it is possible that Project-related construction traffic could contribute to congestion at heavily traveled and/or narrow roadway segments.

To ensure that Project-related construction traffic does not contribute to unacceptable levels of service on area roadways, Mitigation Measure T-2 is proposed. This measure will ensure that potentially significant impacts from construction traffic to roadway congestion are reduced to less-than-significant levels (**Class II**).

Mitigation Measures for Impact T-2

T-2 Prepare Construction Transportation Plan. To reduce the number of Project-related vehicles traveling on roads within the Project area, site construction workers shall be staged off site at marshalling yards or near paved intersections and workers will be shuttled to construction sites in groups in crew vehicles. As part of the construction contract, SCE shall require bidders to submit a construction transportation plan describing how workers would travel to the job site.

Restricted Access to Properties (Criterion TRA3)

Construction of the proposed Project would not restrict access to driveways or otherwise affect access and parking for the adjacent residences, institutions, businesses, and other uses. The proposed Project would not include any trenching or other excavation in road ROWs that would impede access to adjacent uses. Therefore, there would be no impact associated with restricted access to properties.

Restrict the Movements of Emergency Vehicles (Criterion TRA4)

Impact T-3: Construction activities could temporarily interfere with emergency response.

Construction activities could potentially interfere with emergency response by ambulance, fire, paramedic, and police vehicles. The temporary road closures that would be required during stringing activities and during helicopter transport activities in the ANF could lengthen the response time required for emergency vehicles passing through the construction zone. Mitigation Measure T-1a (Prepare Traffic Control Plans) includes measures to reduce potentially significant impacts from construction activities on emergency response to less-than-significant levels (**Class II**).

Disruption to Bus Transit Service (Criterion TRA5)

Impact T-4: Construction activities could temporarily disrupt transit and school bus routes.

Overhead stringing activities that would require short-term road closures associated with construction of the proposed transmission line would disrupt up to three Santa Clarita Transit (SCT) bus routes (Routes 3, 7, and 503) and a number of local school bus routes (see Table C.13-4). Potential impacts would include scheduling delays and temporary bus reroutes. Mitigation Measure T-4 is proposed to reduce significant impacts to public and school bus routes to less-than-significant levels (**Class II**).

Mitigation Measure for Impact T-4

T-4 Avoid Disruption of Bus Service. SCE will coordinate with Santa Clarita Transit at least one month prior to construction to reduce potential interruption of bus transit services. SCE will also consult with the Saugus Union School District at least one month prior to construction to ensure construction activities are scheduled such that they would not disrupt school bus routes.

Disruption to Rail Traffic (Criterion TRA6)

No portion of the proposed transmission line route would encroach on an existing freight or passenger railroad ROW. Therefore, there would be no impact on local rail operations associated with construction of the proposed Project.

Impediment of Pedestrian Movements or Bike Paths (Criterion TRA7)

Impact T-5: Construction activities could temporarily interfere with the use of pedestrian/bicycle paths.

Construction activities for the proposed Project would impact pedestrian and bicycle circulation by temporarily blocking established pedestrian and bicycle routes where the transmission line would cross over roads in the Santa Clarita area. Mitigation Measure T-5 is proposed to reduce significant impacts to pedestrian movements and bike paths to less-than-significant levels (**Class II**).

Mitigation Measure for Impact T-5

T-5 Provide Temporary Pedestrian and Bicycle Access. Where construction will result in temporary closures of sidewalks and other pedestrian facilities, SCE will provide temporary pedestrian access through detours or safe areas along the construction zone. Any affected pedestrian facilities and the alternative facilities or detours that will be provided will be identified in the Traffic Control Plan required pursuant to Mitigation Measure T-1a. Where construction activity results in bike lane closures, appropriate detours and signs will be provided.

Reduction in the Supply of Parking Spaces (Criterion TRA8)

Construction activities associated with the proposed Project would not result in a reduction of the local parking space supply. Construction workers would park personal vehicles at the substation and marshaling yard sites (MM T-2). In addition, proposed construction activities would not temporarily eliminate existing parking spaces that would result in parking deficiencies. Therefore, there would be no impact on parking supplies associated with the construction of the proposed Project.

Conflicts with Planned Transportation Projects (Criterion TRA9)

Impact T-6: Conflict with plans for a City of Santa Clarita connector road.

The proposed transmission line route would cross the route of the planned Santa Clarita Cross-Valley Connector, designed by Caltrans and the City of Santa Clarita to reduce travel demand in the upper Santa Clara Valley area on freeways I-5 and SR-14, at approximately Mile 25.5. Caltrans has expressed concern over possible conflicts that the proposed Project may have with the planned collector (Caltrans, 2005b). Once the road is constructed, the City of Santa Clarita would take jurisdiction of the road. Construction of the road project began in 1997 and is estimated to be completed in 2008 (City of Santa Clarita, 2006b). Mitigation Measure T-6 described below is proposed to reduce potentially significant impacts related to conflicts between the proposed Project and the Santa Clarita Cross-Valley Connector to less-than-significant levels (**Class II**).

Mitigation Measure for Impact T-6

T-6 Coordinate with Caltrans and the City of Santa Clarita to Avoid Conflicts with the Santa Clarita Cross-Valley Connector. SCE shall coordinate project design with Caltrans and the City of Santa Clarita to ensure that structures associated with the transmission line are not placed in locations that could block further widening or development of the Santa Clarita Cross-Valley Connector.

Noticeable Deterioration of Road Surfaces (Criterion TRA10)

Impact T-7: Construction vehicles and equipment could damage road ROWs.

SCE does not expect to cause any physical damage to roads, sidewalks, medians, etc., within public roads or sidewalks. However, there is the potential for unexpected damage to occur on features in road ROWs due to the operation of construction vehicles and equipment. This would be significant, but would be reduced to less-than-significant levels with implementation of Mitigation Measure T-7 (**Class II**), which expands on SCE's proposed local and Forest Service road repair requirements included in APMs TRA-5 and TRA-8.

Mitigation Measure for Impact T-7

T-7 Repair Damaged Road ROWs. If damage to roads, sidewalks, and/or medians (including irrigation systems for landscaped medians) occurs, SCE will be responsible for ensuring repairs are implemented within two months of completion of construction activities at the affected location. Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces.

Adverse Effects to Aviation Activities (Criterion TRA11)

Impact T-8: Project transmission structures could present an aviation hazard.

Although there are no public airports in the immediate vicinity of the proposed Project, the proposed Project would include towers up to 220 feet above the ground surface between Miles 20.3 and 25.6, which could affect aviation activities. However, pursuant to FAA guidelines, SCE would be required to submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the Manager of the FAA Air Traffic Division for review and approval of the project. Adherence to FAA guidelines would ensure that operation of the proposed Project would not cause a significant impact to aviation activities (**Class III**).

Inconsistency with Regional and Local Transportation Plans (Criterion TRA12)

The proposed Project is an energy infrastructure project whose operation would have no impact on transportation projects or routes in the area. As described above, construction of the proposed Project would result in short term, temporary impacts to traffic on local roadways, but construction activities would not impact regional or local transportation plans within the area.

C.13.6 Alternative 1: Partial Undergrounding of Antelope-Pardee Transmission Line

C.13.6.1 Affected Environment

Alternative 1 involves constructing two segments of the proposed transmission line underground. The above-ground portions of Alternative 1 would follow the proposed Project route. The route of the two underground segments, one in the ANF and one in the Santa Clarita area, would differ from that of the proposed Project. The following paragraphs describe the affected environment of the two underground route segments associated with Alternative 1. Alternative 1 would generally result in the same types of impacts as the proposed Project (Impacts T-1 through T-8); however, activities associated with the underground portion of this alternative would result in longer durations of some impacts than those of the proposed Project. This alternative would result in one additional impact (Impact T-9) than the proposed Project.

Angeles National Forest

This alternative would include underground transmission line construction within portions of the Del Sur Ridge Road (Forest System Road 6N18) between proposed Project Miles 11 and 15. Del Sur Ridge Road provides access from the west end of Bouquet Reservoir, down to Haskell Canyon Road at the southern boundary of the ANF. Del Sur Ridge Road is used by Bouquet Canyon Stone Company, Inc. for hauling stone from its quarry, located on the south side of Del Sur Ridge Road near proposed Project Mile 13.4. Quarry Road (6N19) and Bouquet Canyon Reservoir Road (6N14) provide access to Del Sur Ridge Road from the south. The Forest Service does not maintain ADT data for these roads (USDA, 2005). Otherwise, the affected environment for this alternative within the ANF is the same as that for the proposed Project.

Santa Clarita

This alternative would include underground transmission line construction within the ROWs of San Francisquito Canyon Road, Copper Hill Drive, and Newhall Ranch Road, and would cross McBean Parkway between proposed Project Miles 22.7 and 25.6. See Table C.13-6 for the information about the roads in the Santa Clarita area of Alternative 1 that would be affected by underground construction activities. SCT bus Route 7 provides service to Copper Hill Road and McBean Parkway. In addition, a school bus route used by Saugus Union School District uses Copper Hill Road (SCT, 2005). Otherwise, the affected environment for this alternative within the Santa Clarita area is the same as that for the proposed Project.

Roadway	Jurisdiction	Description	ADT*	Route Mile	Orientation to Route
San Francisquito Canyon Rd.	Los Angeles County	2 lanes	5,497	22.7 –23.0	Parallel With
Copper Hill Drive	Los Angeles County and Santa Clarita	4 lanes	12,350 to 31,168	23.0 – 25.3	Parallel With
McBean Parkway	Los Angeles County	4 lanes	16,233	23.4	Underground Crossing
Newhall Ranch Road	Santa Clarita	4 lanes	NA	25.3 – 25.6	Parallel With

Sources: Los Angeles County, 2005a; Santa Clarita, 2005a; and Santa Clarita, 2005b.

*The majority of the presented traffic counts for Los Angeles County were collected in 2004; the counts for San Francisquito Canyon Road are from 2003. The counts for Santa Clarita roads were collected in 2000. NA = Not Available.

C.13.6.2 Impacts and Mitigation Measures

Closure of Roads to Through Traffic or Reduction of Travel Lanes (Criterion TRA1)

Construction of this alternative would have the potential to result in much longer temporary road and/or lane closures (Impact T-1) during underground transmission line construction activities compared to the overhead construction activities associated with the proposed Project, particularly along those roads where the transmission line would be installed within or immediately parallel to the road (e.g., Del Sur Ridge Road, San Francisquito Canyon Road, Copper Hill Drive). For example, to accommodate the overhead stringing of transmission line across a road, a road would need to remain closed for approximately 15 minutes; however, underground construction activities may result in lane closures of up to several hours. Construction work in the ANF would also likely require improvements to Quarry Road (6N19) and Bouquet Canyon Reservoir Road (6N14). Traffic detours or implementation of controlled continuous traffic breaks may be required during construction along the underground construction route roads, as well as the Forest Service roads that would need to be improved. Implementation of Mitigation Measures T-1a (Prepare Traffic Control Plans) and T-1b (Restrict Lane Closures) would ensure that potentially significant impacts associated with short-term lane and road closures during underground construction activities are reduced to less-than-significant levels (**Class II**).

Unacceptable Level of Service Reduction to Vicinity Roads (Criterion TRA2)

Construction-related commute traffic and truck/equipment activity associated with Alternative 1 could contribute to congestion on the same area roadways as traffic from the proposed Project; however, activities associated with the underground portion of this alternative would result in longer durations of impacts than for the proposed Project. Implementation of Mitigation Measure T-2 (Prepare Construction Transportation Plan) would ensure that potentially significant impacts to levels of service on area roadways as a result of Project-related construction traffic are reduced to less-than-significant levels (**Class II**).

Restricted Access to Properties (Criterion TRA3)

Impact T-9: Underground construction activities would temporarily restrict access to properties.

The underground route segments of Alternative 1 would be located within or immediately adjacent to existing Forest Service, County, and City of Santa Clarita roads that serve adjacent businesses and residences. During excavation of the trench for the underground cable, access to side streets, property entrances, and driveways would be temporarily disrupted and possibly blocked. This could potentially disrupt businesses, such as the Bouquet Canyon Stone Quarry on Del Sur Ridge Road, and could prevent residents in the Santa Clarita area from accessing their residences. To reduce the severity of the impact to less-than-significant levels, Mitigation Measure T-9 is recommended (**Class II**). This impact is specific to the construction activities associated with the underground portions of Alternative 1 and does not apply to the proposed Project or other proposed alternatives.

Mitigation Measure for Impact T-9

T-9 Provide Continuous Access to Properties. SCE or its construction contractor shall provide at all times the ability to quickly lay a temporary steel plate trench bridge upon request to ensure driveway access to businesses and residences, and shall provide continuous access to properties when not actively constructing the underground cable alignment. In the event that trench stability could be compromised by the laying of a temporary steel plate bridge during an early phase of trench construction, the construction contractor may defer a request for access to the soonest possible time until the stability of the trench has been assured, provided SCE has provided 48-hour advance notification of the potential for disrupted access to any business or residence that may experience such delayed access (including the Bouquet Canyon Stone Quarry). The notification shall include information on restoring access and the estimated amount of time that access may be blocked. In addition, SCE shall develop construction plans that will minimize blocked access during the workday.

Restrict the Movements of Emergency Vehicles (Criterion TRA4)

Construction of this alternative would have the potential to result in much longer temporary road and/or lane closures during underground transmission line construction activities compared to the overhead construction activities associated with the proposed Project, particularly along those roads where the transmission line would be installed within or immediately parallel to the road (e.g., Del Sur Ridge Road, San Francisquito Canyon Road, Copper Hill Drive). The temporary road closures could lengthen the response time required for emergency vehicles passing through the construction zone (Impact T-3). Mitigation Measure T-1a (Prepare Traffic Control Plans) includes measures to reduce potentially significant impacts from construction activities on emergency response to less-than-significant levels (**Class II**).

Disruption to Bus Transit Service (Criterion TRA5)

Underground construction activities could disrupt service of SCT bus Route 7 along Copper Hill Road and McBean Parkway and a local Saugus Union School District bus route along Copper Hill Road (Impact T-4). Potential impacts would include scheduling delays and temporary bus reroutes. Mitigation Measure T-4 (Avoid Disruption of Bus Service) is proposed to reduce potentially significant impacts to public and school bus routes to less-than-significant levels (**Class II**). Alternative 1 would have the same type of impacts in the same locations as the proposed Project; however, activities associated with the underground portion of this alternative would result in longer durations of impacts than for the proposed Project.

Disruption to Rail Traffic (Criterion TRA6)

As with the proposed Project, no portion of this alternative route would encroach on an existing freight or passenger railroad ROW. Therefore, there would be no impact on local rail operations associated with the construction of this alternative.

Impediment of Pedestrian Movements or Bike Paths (Criterion TRA7)

Impacts to pedestrian movements and bike paths from the Alternative 1 re-route would be the same as the proposed Project with regard to overhead stringing of transmission lines in the Santa Clarita area (Impact 5). Underground construction activities for the Alternative 1 re-route would also temporarily block established pedestrian routes in the ANF (Miles 11 to 15) and in the Santa Clarita area (Miles 22.7 to 25.6). This alternative would also temporarily block bicycle routes in the Santa Clarita area (Miles 22.7 to 25.6). Mitigation Measure T-5 (Provide Temporary Pedestrian and Bicycle Access) would reduce potentially significant impacts to pedestrian movements and bike paths in the Santa Clarita area to less-than-significant levels (**Class II**).

Reduction in the Supply of Parking Spaces (Criterion TRA8)

Construction activities associated with Alternative 1 would not result in a reduction of the local parking space supply. Construction workers would park personal vehicles at the substation and marshaling yard sites (MM T-2). In addition, underground construction activities in the ANF and Santa Clarita areas would not temporarily eliminate existing parking spaces that would result in parking deficiencies. Therefore, as with the proposed Project, there would be no impact on parking supplies associated with the construction of Alternative 1.

Conflicts with Planned Transportation Projects (Criterion TRA9)

The underground portion of Alternative 1 in the Santa Clarita area would be installed within the Newhall Ranch Road ROW between Pardee Substation and Copper Hill Road. This is the same ROW planned for the Santa Clarita Cross-Valley Connector, designed by Caltrans and the City of Santa Clarita to reduce travel demand in the upper Santa Clara Valley area on freeways I-5 and SR-14. Therefore, there is a potential that this alternative could result in the same conflict with the Santa Clarita Cross-Valley Connector project as the proposed Project (Impact T-6). Mitigation Measure T-6 (Coordinate with Caltrans and the City of Santa Clarita to Avoid Conflicts with the Santa Clarita Cross-Valley Connector) is proposed to reduce potentially significant impacts related to conflicts between Alternative 1 and the Santa Clarita Cross-Valley Connector to less-than-significant levels (**Class II**).

Noticeable Deterioration of Road Surfaces (Criterion TRA10)

As with the proposed Project, there is potential for unexpected damage to occur on features in road ROWs due to the operation of construction vehicles and equipment (Impact T-7). Since construction activities associated

with the underground portions of this alternative would be more intensive and of longer duration than construction activities at these locations under the proposed Project, potential damage to road ROWs could be similarly more intensive than that of the proposed Project. This would be potentially significant, but reduced to less-than-significant levels (**Class II**) with implementation of Mitigation Measure T-7, (Repair Damaged Road ROWs) which expands on SCE’s proposed local and Forest Service road repair requirements included in APMs TRA-5 and TRA-8.

Adverse Effects to Aviation Activities (Criterion TRA11)

For Alternative 1, new single-circuit 500-kV towers would be placed in the vacant position of the existing Pardee-Vincent ROW beginning at Mile 20.3, rather than replacing the existing single-circuit 500-kV towers with double-circuit 500-kV towers to keep the vacant position open. As such, Alternative 1 would have no double-circuit 500-kV towers. As shown in Figure B.2-4, single-circuit 500-kV towers range in height from 113 to 178 feet. Therefore, Alternative 1 would have no impact on aviation activities (Criterion TRA11).

Inconsistency with Regional and Local Transportation Plans (Criterion TRA12)

The proposed Project, including the Alternative 1 re-route, is an energy infrastructure project whose operation would have no impact on transportation projects or routes in the area. As described above, construction of the proposed Project would result in short term, temporary impacts to traffic on local roadways, but construction activities would not impact regional or local transportation plans within the area.

C.13.7 Alternative 2: Antelope-Pardee East Mid-Slope

C.13.7.1 Affected Environment

The proposed re-route segment for Alternative 2 is located entirely within the ANF to the east of the proposed route between proposed route Miles 5.7 and 17.5. The roadways that would be crossed by, or parallel to, the alternative route segment are summarized below in Table C.13-7. Bouquet Canyon Road is the only County road in the immediate vicinity of the alternative route segment. Bouquet Canyon Road has an ADT rate of 2,699 at the alternative route crossing (Los Angeles County, 2006). The Forest Service does not maintain ADT data for the roads listed in Table C.13-7 (USDA, 2005).

Roadway	Jurisdiction	Description	Route Mile	Orientation to Route
Leona Divide Fire Road (6N04)	Forest Service	2 lane (dirt)	6.5	Overhead Crossing
Spunky Canyon Road (6N09)	Los Angeles Co.	2 lane	8.5	Overhead Crossing
Bouquet Canyon Road	Los Angeles Co.	2 lane	8.6	Overhead Crossing
Artesian Springs Road (6N08)	Forest Service	2 lane (dirt)	8.8	Overhead Crossing
Artesian Springs Road (6N08)	Forest Service	2 lane (dirt)	9.5	Overhead Crossing
Bouquet Canyon Road	Los Angeles Co.	2 lane	10.8	Overhead Crossing
Quarry Road (6N19)	Forest Service	2 lane (dirt)	12.7 – 12.9	Parallel With
Del Sur Ridge Road (6N18)	Forest Service	2 lane (dirt)	16.5	Overhead Crossing
Del Sur Ridge Road (6N18)	Forest Service	2 lane (dirt)	19.1	Overhead Crossing

C.13.7.2 Impacts and Mitigation Measures

Closure of Roads to Through Traffic or Reduction of Travel Lanes (Criterion TRA1)

As with the proposed Project, construction of Alternative 2 would likely result in temporary closures of the roads identified in Table C.13-7 during transmission line stringing activities (Impact T-1). The Alternative 2

re-route would include crossings at Spunky Canyon Road and Bouquet Canyon Road that would be within close proximity to each other (see Figure C.13-2). Bouquet Canyon Road provides a north-south route from Palmdale through the ANF to Santa Clarita. Spunky Canyon Road provides access to residential uses within the northern portion of the ANF. The proximity of these two crossings could result in slightly increased duration and magnitude of Impact T-1 compared to the proposed Project. Implementation of Mitigation Measures T-1a (Prepare Traffic Control Plans) and T-1b (Restrict Lane Closures) would ensure that potentially significant impacts associated with short-term road closures during overhead transmission line stringing activities are reduced to less-than-significant levels (**Class II**).

Unacceptable Level of Service Reduction to Vicinity Roads (Criterion TRA2)

As with the proposed Project, construction-related commute traffic and truck/equipment activity associated with Alternative 2 could contribute to congestion on area roadways (Impact T-2). The Alternative 2 re-route would include crossings at Spunky Canyon Road and Bouquet Canyon Road that would be within close proximity to each other. Bouquet Canyon Road provides a north-south route from Palmdale through the ANF to Santa Clarita. Spunky Canyon Road provides access to residential uses within the northern portion of the ANF. The proximity of these two crossings could result in slightly increased duration and magnitude of Impact T-2 compared to the proposed Project. Implementation of Mitigation Measure T-2 (Prepare Construction Transportation Plan) would ensure that potentially significant impacts to levels of service on area roadways as a result of Project-related construction traffic are reduced to less-than-significant levels (**Class II**).

Restricted Access to Properties (Criterion TRA3)

As with the proposed Project, construction of Alternative 2 would not restrict access to driveways or otherwise affect access and parking for the adjacent residences, institutions, businesses, or other uses. This alternative would not include any trenching or other excavation in road ROWs that would impede access to adjacent uses. Therefore, Alternative 2 would have no impact associated with restricted access to properties.

Restrict the Movements of Emergency Vehicles (Criterion TRA4)

The temporary road closures that would be required during stringing activities along the proposed route of Alternative 2 and during helicopter transport activities in the ANF could lengthen the response time required for emergency vehicles passing through the construction zone (Impact T-3). The Alternative 2 re-route would include crossings at Spunky Canyon Road and Bouquet Canyon Road that would be within close proximity to each other. Bouquet Canyon Road provides a north-south route from Palmdale through the ANF to Santa Clarita. Spunky Canyon Road provides access to residential uses within the northern portion of the ANF. The proximity of these two crossings could result in slightly increased duration of Impact T-4 compared to the proposed Project. Mitigation Measure T-1a (Prepare Traffic Control Plans) includes measures to reduce potentially significant impacts from construction activities on emergency response to less-than-significant levels (**Class II**).

Disruption to Bus Transit Service (Criterion TRA5)

The route segment of Alternative 2 in the ANF would have no affect on transit service. However, Alternative 2 is the same as the proposed Project in the Santa Clarita area. Therefore, overhead stringing activities that would require short-term road closures could disrupt up to three SCT bus routes (Routes 3, 7, and 503) and a number of local school bus routes (Impact T-4). Mitigation Measure T-4 (Avoid Disruption of Bus Service) is proposed to reduce potentially significant impacts to public and school bus routes to less-than-significant levels (**Class II**).

Disruption to Rail Traffic (Criterion TRA6)

As with the proposed Project, no portion of Alternative 2 would encroach on an existing freight or passenger railroad ROW. Therefore, Alternative 2 would have no impact on local rail operations associated with construction.

Impediment of Pedestrian Movements or Bike Paths (Criterion TRA7)

The route segment of Alternative 2 in the ANF would have no effect on pedestrian movements or bike paths. However, Alternative 2 is the same as the proposed Project in the Santa Clarita area. Therefore, construction activities for Alternative 2 would impact pedestrian and bicycle circulation by temporarily blocking established pedestrian and bicycle routes where the transmission line would cross over roads in the Santa Clarita area (Impact T-5). The Alternative 2 re-route would include crossings at Spunky Canyon Road and Bouquet Canyon Road that would be within close proximity to each other. Bouquet Canyon Road provides a north-south route from Palmdale through the ANF to Santa Clarita. Spunky Canyon Road provides access to residential uses within the northern portion of the ANF. The proximity of these two crossings could result in slightly increased duration of Impact T-7 compared to the proposed Project. Mitigation Measure T-5 (Provide Temporary Pedestrian and Bicycle Access) is proposed to reduce potentially significant impacts to pedestrian movements and bike paths to less-than-significant levels (**Class II**).

Reduction in the Supply of Parking Spaces (Criterion TRA8)

Construction activities associated with Alternative 2 would not result in a reduction of the local parking space supply. Construction workers would park personal vehicles at the substation and marshaling yard sites (MM T-2). In addition, overhead transmission line construction activities would not temporarily eliminate existing parking spaces that would result in parking deficiencies. Therefore, as with the proposed Project, there would be no impact on parking supplies associated with the construction of Alternative 2.

Conflicts with Planned Transportation Projects (Criterion TRA9)

The route section of Alternative 2 in the ANF would not conflict with a planned transportation project. However, Alternative 2 is the same as the proposed Project in the Santa Clarita area, where the alternative route would cross the route of the planned Santa Clarita Cross-Valley Connector, designed by Caltrans and the City of Santa Clarita to reduce travel demand in the upper Santa Clara Valley area on freeways I-5 and SR-14. Therefore, there is a potential that this alternative could conflict with the Santa Clarita Cross-Valley Connector project (Impact T-6). Mitigation Measure T-6 (Coordinate with Caltrans and the City of Santa Clarita to Avoid Conflicts with the Santa Clarita Cross-Valley Connector) is proposed to reduce potentially significant impacts related to conflicts between the Project and the Santa Clarita Cross-Valley Connector to less-than-significant levels (**Class II**).

Noticeable Deterioration of Road Surfaces (Criterion TRA10)

There is a potential for unexpected damage to occur on features in road ROWs due to the operation of construction vehicles and equipment (Impact T-7). This would be potentially significant, but reduced to less-than-significant levels (**Class II**) with implementation of Mitigation Measure T-7 (Repair Damaged Road ROWs) which expands on SCE's proposed local and Forest Service road repair requirements included in APMs TRA-5 and TRA-8.

Adverse Effects to Aviation Activities (Criterion TRA11)

Alternative 2 would be the same as the proposed Project in the Santa Clarita area. Therefore, the alternative would include towers up to 220 feet above the ground surface between Miles 20.3 and 25.6, which could affect aviation activities (Impact T-8). However, pursuant to FAA guidelines, SCE would be required to submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the Manager of the FAA Air Traffic Division for review and approval of this alternative route. Adherence to FAA guidelines would ensure that operation of the alternative would not cause a significant impact to aviation activities (**Class III**).

Inconsistency with Regional and Local Transportation Plans (Criterion TRA12)

The proposed Project, including the Alternative 2 re-route, is an energy infrastructure project whose operation would have no impact on transportation projects or routes in the area. As described above, construction of the proposed Project would result in short term, temporary impacts to traffic on local roadways, but construction activities would not impact regional or local transportation plans within the area.

C.13.8 Alternative 3: Antelope-Pardee Single-Circuit 500-kV Towers between Haskell Canyon and Pardee Substation

C.13.8.1 Affected Environment

Alternative 3 is a minor variation of the proposed Project under which 21 single-circuit transmission towers would be constructed between Miles 20.3 and 25.6 (on non-NFS lands) of the proposed route rather than removing the existing single circuit towers and replacing them with double circuit towers. From a transportation and traffic standpoint, the affected environment and potential impacts for Alternative 3 would be the same as those for the proposed Project (see Section C.13.1.1).

C.13.8.2 Impacts and Mitigation Measures

Alternative 3 would result in the same impacts as those identified for the proposed Project in Section C.13.5, with the exception of construction traffic (Impact T-2) and effects to aviation activities (Impact T-8). Under Alternative 3, the existing single-circuit 500-kV towers between Miles 20.3 and 25.6 would not be removed.

Closure of Roads to Through Traffic or Reduction of Travel Lanes (Criterion TRA1)

As with the proposed Project, construction of Alternative 3 would likely result in the temporary closure of area roads during overhead transmission line stringing activities (Impact T-1). Implementation of Mitigation Measures T-1a (Prepare Traffic Control Plans) and T-1b (Restrict Lane Closures) would ensure that potentially significant impacts associated with the short-term road closure during overhead transmission line stringing activities are reduced to less-than-significant levels (**Class II**).

Unacceptable Level of Service Reduction to Vicinity Roads (Criterion TRA2)

Construction-related commute traffic and truck/equipment activity associated with Alternative 3 could contribute to congestion on the same area roadways as the proposed Project. Implementation of Mitigation Measure T-2 (Prepare Construction Transportation Plan) would ensure that potentially significant impacts to levels of service on area roadways as a result of Project-related construction traffic are reduced to less-than-significant levels (**Class II**).

Restricted Access to Properties (Criterion TRA3)

Construction of Alternative 3 would not restrict access to driveways or otherwise affect access and parking for the adjacent residences, institutions, businesses, or other uses. This alternative would not include any trenching or other excavation in road ROWs that would impede access to adjacent uses. Therefore, Alternative 3 would have no impact associated with restricted access to properties.

Restrict the Movements of Emergency Vehicles (Criterion TRA4)

Same as the proposed Project, construction activities associated with Alternative 3 could potentially interfere with emergency response by ambulance, fire, paramedic, and police vehicles. The temporary road closures that would be required during stringing activities and during helicopter transport activities in the ANF could lengthen the response time required for emergency vehicles passing through the construction zone (Impact T-3). Mitigation Measure T-1a (Prepare Traffic Control Plans) includes measures to reduce potentially significant impacts from construction activities on emergency response to less-than-significant levels (**Class II**).

Disruption to Bus Transit Service (Criterion TRA5)

Alternative 3 would be the same as the proposed Project with regards to Criterion TRA5. Overhead stringing activities that would require short-term road closures could disrupt up to three SCT bus routes (Routes 3, 7, and 503) and a number of local school bus routes (Impact T-4). Mitigation Measure T-4 (Avoid Disruption of Bus Service) is proposed to reduce potentially significant impacts to public and school bus routes to less-than-significant levels (**Class II**).

Disruption to Rail Traffic (Criterion TRA6)

As with the proposed Project, no portion of Alternative 3 would encroach on an existing freight or passenger railroad ROW. Therefore, construction of Alternative 3 would have no impact on local rail operations.

Impediment of Pedestrian Movements or Bike Paths (Criterion TRA7)

As with the proposed Project, construction activities for Alternative 3 would impact pedestrian and bicycle circulation by temporarily blocking established pedestrian and bicycle routes where the transmission line would cross over roads in the Santa Clarita area (Impact T-5). Mitigation Measure T-5 (Provide Temporary Pedestrian and Bicycle Access) is proposed to reduce potentially significant impacts to pedestrian movements and bike paths to less-than-significant levels (**Class II**).

Reduction in the Supply of Parking Spaces (Criterion TRA8)

As with the proposed Project, construction activities associated with Alternative 3 would not result in a reduction of the local parking space supply. Construction workers would park personal vehicles at the substation and marshaling yard sites (MM T-2). In addition, overhead transmission line construction activities would not temporarily eliminate existing parking spaces that would result in parking deficiencies. Therefore, as with the proposed Project, there would be no impact on parking supplies associated with the construction of Alternative 3.

Conflicts with Planned Transportation Projects (Criterion TRA9)

Alternative 3 is the same as the proposed Project with regards to potential conflicts with the Santa Clarita Cross-Valley Connector project (Impact T-6). Mitigation Measure T-6 (Coordinate with Caltrans and the City of Santa Clarita to Avoid Conflicts with the Santa Clarita Cross-Valley Connector) is proposed to reduce potentially significant impacts related to conflicts between the Project and the Santa Clarita Cross-Valley Connector to less-than-significant levels (**Class II**).

Noticeable Deterioration of Road Surfaces (Criterion TRA10)

There is a potential for unexpected damage to occur on features in road ROWs due to the operation of construction vehicles and equipment (Impact T-7). This would be potentially significant, but reduced to less-than-significant levels (**Class II**) with implementation of Mitigation Measure T-7 (Repair Damaged Road ROWs), which expands on SCE's proposed local and Forest Service road repair requirements included in APMs TRA-5 and TRA-8.

Adverse Effects to Aviation Activities (Criterion TRA11)

Alternative 3 would include the use of shorter towers (up to 178 feet) in the Santa Clarita area, thus avoiding any impacts to aviation safety. Unlike the proposed Project, Alternative 3 would have no impact associated with Criterion TRA11.

Inconsistency with Regional and Local Transportation Plans (Criterion TRA12)

The proposed Project, including the Alternative 3 re-route, is an energy infrastructure project whose operation would have no impact on transportation projects or routes in the area. As described above, construction of the proposed Project would result in short term, temporary impacts to traffic on local roadways, but construction activities would not impact regional or local transportation plans within the area.

C.13.9 Alternative 4: Antelope-Pardee Re-Routing of New Right-of-Way Along Haskell Canyon

C.13.9.1 Affected Environment

The Alternative 4 re-route is the same as the proposed Project except for a 3.1-mile segment between Mile 17.5 and Mile 20.3. At Mile 17.5, north of Haskell Canyon Road, the route for Alternative 4 would divert from the proposed Project route and proceed in a southerly direction where the proposed Project route would shift to the west-southwest. This segment would cross one road, Del Sur Ridge Road, at Mile 17.7 of the proposed route for Alternative 4. Del Sur Ridge Road is a Forest System road (6N18) that has a dirt surface with two lanes. From a transportation and traffic standpoint, the affected environment and potential impacts for Alternative 4 would be the same as those for the proposed Project (see Section C.13.5).

C.13.9.2 Impacts and Mitigation Measures

Alternative 4 would result in the same impacts as those identified for the proposed Project in Section C.13.5. From a traffic and transportation perspective, Alternative 4 is identical to the proposed Project except this alternative would cross Del Sur Ridge Road approximately 1.5 miles north of where the proposed Project route crosses it, which would have no effect on the types or duration of construction-related impacts identified for the proposed Project.

Closure of Roads to Through Traffic or Reduction of Travel Lanes (Criterion TRA1)

As with the proposed Project, construction of Alternative 4 would likely result in the temporary closure of area roads during overhead transmission line stringing activities (Impact T-1). Implementation of Mitigation Measures T-1a (Prepare Traffic Control Plans) and T-1b (Restrict Lane Closures) would ensure that potentially significant impacts associated with the short-term road closure during overhead transmission line stringing activities are reduced to less-than-significant levels (**Class II**).

Unacceptable Level of Service Reduction to Vicinity Roads (Criterion TRA2)

As with the proposed Project, construction-related commute traffic and truck/equipment activity associated with Alternative 4 could contribute to congestion on area roadways. Implementation of Mitigation Measure T-2 (Prepare Construction Transportation Plan) would ensure that potentially significant impacts to levels of service on area roadways as a result of Project-related construction traffic are reduced to less-than-significant levels (**Class II**).

Restricted Access to Properties (Criterion TRA3)

As with the proposed Project, construction of Alternative 4 would not restrict access to driveways or otherwise affect access and parking for the adjacent residences, institutions, businesses, and other uses. This alternative would not include any trenching or other excavation in road ROWs that would impede access to adjacent uses. Therefore, Alternative 4 would have no impact associated with restricted access to properties.

Restrict the Movements of Emergency Vehicles (Criterion TRA4)

The temporary road closures that would be required along the proposed Alternative 4 route during stringing activities and during helicopter transport activities in the ANF could lengthen the response time required for emergency vehicles passing through the construction zone (Impact T-3). Mitigation Measure T-1a (Prepare Traffic Control Plans) includes measures to reduce potentially significant impacts from construction activities on emergency response to less-than-significant levels (**Class II**).

Disruption to Bus Transit Service (Criterion TRA5)

The Alternative 4 reroute in Haskell Canyon would have no affect on transit service. However, Alternative 4 is the same as the proposed Project in the Santa Clarita area. Therefore, overhead stringing activities that would require short-term road closures could disrupt up to three SCT bus routes (Routes 3, 7, and 503) and a number of local school bus routes (Impact T-4). Mitigation Measure T-4 (Avoid Disruption of Bus Service) is proposed to reduce potentially significant impacts to public and school bus routes to less-than-significant levels (**Class II**).

Disruption to Rail Traffic (Criterion TRA6)

As with the proposed Project, no portion of Alternative 4 would encroach on an existing freight or passenger railroad ROW. Therefore, there would be no impact on local rail operations associated with the construction of this alternative.

Impediment of Pedestrian Movements or Bike Paths (Criterion TRA7)

The Alternative 4 re-route in Haskell Canyon would have no affect on pedestrian movements or bike paths. However, Alternative 4 is the same as the proposed Project in the Santa Clarita area. Therefore, construction activities for Alternative 4 would impact pedestrian and bicycle circulation by temporarily blocking established pedestrian and bicycle routes where the transmission line would cross over roads in the Santa Clarita area (Impact T-5). Mitigation Measure T-5 (Provide Temporary Pedestrian and Bicycle Access) is proposed to reduce potentially significant impacts to pedestrian movements and bike paths to less-than-significant levels (**Class II**).

Reduction in the Supply of Parking Spaces (Criterion TRA8)

As with the proposed Project, construction activities associated with Alternative 4 would not result in a reduction of the local parking space supply. Construction workers would park personal vehicles at the substation and

marshaling yard sites (MM T-2). In addition, overhead transmission line construction activities would not temporarily eliminate existing parking spaces that would result in parking deficiencies. Therefore, there would be no impact on parking supplies associated with construction of Alternative 4.

Conflicts with Planned Transportation Projects (Criterion TRA9)

The Alternative 4 re-route in Haskell Canyon would not conflict with a planned transportation project. However, Alternative 4 is the same as the proposed Project in the Santa Clarita area, where the transmission line route would cross the route of the planned Santa Clarita Cross-Valley Connector. Therefore, there is a potential that this alternative could conflict with the Santa Clarita Cross-Valley Connector project (Impact T-6). Mitigation Measure T-6 (Coordinate with Caltrans and the City of Santa Clarita to Avoid Conflicts with the Santa Clarita Cross-Valley Connector) is proposed to reduce potentially significant impacts related to conflicts between the Project and the Santa Clarita Cross-Valley Connector to less-than-significant levels (**Class II**).

Noticeable Deterioration of Road Surfaces (Criterion TRA10)

There is a potential for unexpected damage to occur on features in road ROWs due to the operation of construction vehicles and equipment (Impact T-7). This would be potentially significant, but reduced to less-than-significant levels (**Class II**) with implementation of Mitigation Measure T-7 (Repair Damaged Road ROWs), which expands on SCE's proposed local and Forest Service road repair requirements included in APMs TRA-5 and TRA-8.

Adverse Effects to Aviation Activities (Criterion TRA11)

Alternative 4 would be the same as the proposed Project in the Santa Clarita area. Therefore, the alternative would include towers up to 220 feet above the ground surface between Miles 20.3 and 25.6, which could affect aviation activities (Impact T-8). However, pursuant to FAA guidelines, SCE would be required to submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the Manager of the FAA Air Traffic Division for review and approval of this alternative route. Adherence to FAA guidelines would ensure that operation of the alternative would not cause a significant impact to aviation activities (**Class III**).

Inconsistency with Regional and Local Transportation Plans (Criterion TRA12)

The proposed Project, including the Alternative 4 re-route, is an energy infrastructure project whose operation would have no impact on transportation projects or routes in the area. As described above, construction of the proposed Project would result in short term, temporary impacts to traffic on local roadways, but construction activities would not impact regional or local transportation plans within the area.

C.13.10 Alternative 5: Antelope-Pardee Sierra-Pelona Re-Route

C.13.10.1 Affected Environment

The northern end of this alternative re-route is located in the western portion of the City of Lancaster, a short portion of the central portion of the route is in the City of Palmdale, and the rest of the reroute is in unincorporated Los Angeles County. Figure C.13-4 shows the road crossings for the proposed Project and Alternative 5. SR-14, which provides regional access to the area, would be crossed by the Alternative 5 reroute two times. The majority of the other roads that would be crossed by the alternative reroute serve as collectors and allow travel between Lancaster and other communities, such as Santa Clarita. Table C.13-8 presents the public roadways that would be crossed by Alternative 5. The table also presents the jurisdiction, number of lanes, the route milepost (Mile) closest to the road and the orientation of the road to the alternative reroute.

Figure C.13-4. Alternative 5 Road Crossings

[CLICK HERE TO VIEW](#)

Roadway	Jurisdiction	Description	ADT*	Route Mile	Orientation to Route
Avenue K	Lancaster	2 lanes	2,032	1.8	Overhead Crossing
Kellogg Valley Road	Los Angeles Co.	2 lanes	NA	4.2	Overhead Crossing
Elizabeth Lake Road	Los Angeles Co.	2 lanes	2,838	4.5	Overhead Crossing
107th Street West	Los Angeles Co.	2 lanes	NA	6.1	Overhead Crossing
87th Street West	Los Angeles Co.	2 lanes	NA	8.3	Overhead Crossing
Bouquet Canyon Road	Los Angeles Co.	2 lanes	2,603	9.1	Overhead Crossing
Sierra Pelona West	Palmdale	2 lanes	NA	10.5	Overhead Crossing
Hierba Road	Los Angeles Co.	2 lanes	NA	13.6	Overhead Crossing
Sierra Highway	Los Angeles Co.	2 lanes	6,466	14.1	Overhead Crossing
Pratty Road	Los Angeles Co.	2 lanes	NA	14.2	Overhead Crossing
Escondido Canyon Road	Los Angeles Co.	2 lanes	1,567	16.2	Overhead Crossing
Old Sage Road	Los Angeles Co.	2 lanes	1,567	16.5	Overhead Crossing
State Route 14	Caltrans	2 lanes	NA	17.2	Overhead Crossing
Augua Dulce Canyon Road	Los Angeles Co.	2 lanes	316	21.8	Overhead Crossing
State Route 14	Caltrans	2 lanes	NA	22.5	Overhead Crossing
Tick Canyon Road	Los Angeles Co.	2 lanes (dirt)	NA	23.5	Overhead Crossing
Sierra Highway	Los Angeles Co.	2 lanes	10,537	26.0	Overhead Crossing
Hume Canyon	Los Angeles Co.	2 Lanes	NA	27.2	Overhead Crossing
Vasquez Canyon Road	Los Angeles Co.	2 lanes	6,632	28.2	Overhead Crossing
Bouquet Canyon Road	Los Angeles Co.	2 lanes	10,700	30.3	Overhead Crossing
Blue Cloud Road	Los Angeles Co.	2 Lanes	NA	31.0	Overhead Crossing
North Rock Canyon Drive	Los Angeles Co.	2 lanes	NA	32.8	Overhead Crossing
Garnet Canyon Drive	Los Angeles Co.	2 lanes	1,486	33.3	Overhead Crossing
Tamarack Lane	City of Santa Clarita	2 lanes	NA	33.6	Overhead Crossing
Seco Canyon Road	City of Santa Clarita	2 lanes	10,300	33.9	Overhead Crossing
San Francisquito Canyon Rd.	Los Angeles Co.	2 lanes	5,497	34.6	Overhead Crossing
Copper Hill Drive (at San Francisquito Canyon Road)	Los Angeles Co.	4 lanes	31,168	34.7	Overhead Crossing
McBean Parkway	City of Santa Clarita	4 lanes	16,233	35.0	Overhead Crossing
Copper Hill Drive (near Copperstone Drive)	City of Santa Clarita	4 lanes	12,350	36.3	Overhead Crossing
Kelly Johnson Parkway	City of Santa Clarita	2 lanes	NA	36.6	Overhead Crossing
Rye Canyon Road	City of Santa Clarita	2 lanes	NA	37.0	Overhead Crossing
Brady Parkway	City of Santa Clarita	2 lanes	NA	37.1	Overhead Crossing

Source: Los Angeles County, 2006.

*The majority of the presented traffic counts for Los Angeles County were collected in 2006; the counts for Agua Dulca Canyon, Vasquez Canyon Road, and Bouquet Canyon Road are from 2005; Escondido Canyon Road is from 2003; Avenue K is from 2002; and Sierra Highway is from 2001. NA = Not Available.

C.13.10.2 Impacts and Mitigation Measures

Closure of Roads to Through Traffic or Reduction of Travel Lanes (Criterion TRA1)

As with the proposed Project, construction of Alternative 5 would likely result in temporary closures of the roads identified in Table C.13-8 during overhead transmission line stringing activities (Impact T-1). Although

this alternative would result in no impacts to the ANF, it would result in nine more road crossings than the proposed Project, including two crossings of State Route 14. The increased number of crossings would result in increased duration and magnitude of Impact T-1. Implementation of Mitigation Measures T-1a (Prepare Traffic Control Plans) and T-1b (Restrict Lane Closures) would ensure that potentially significant impacts associated with short-term road closures during overhead transmission line stringing activities are reduced to less-than-significant levels (**Class II**).

Unacceptable Level of Service Reduction to Vicinity Roads (Criterion TRA2)

As with the proposed Project, construction-related commute traffic and truck/equipment activity associated with Alternative 5 could contribute to congestion on area roadways. Implementation of Mitigation Measure T-2 (Prepare Construction Transportation Plan) would ensure that potentially significant impacts to levels of service on area roadways as a result of Project-related construction traffic are reduced to less-than-significant levels (**Class II**).

Restricted Access to Properties (Criterion TRA3)

Construction of Alternative 5 would not restrict access to driveways or otherwise affect access and parking for the adjacent residences, institutions, businesses, and other uses (Impact T-8). This alternative would not include any trenching or other excavation in road ROWs that would impede access to adjacent uses. Therefore, as with the proposed Alternative, Alternative 5 would have no impact associated with restricted access to properties.

Restrict the Movements of Emergency Vehicles (Criterion TRA4)

As with the proposed Project, the temporary road closures that would be required during stringing activities for Alternative 5 could lengthen the response time required for emergency vehicles passing through the construction zone (Impact T-3). Although this alternative would result in no impacts to the ANF, it would result in nine more road crossings than the proposed Project, including two crossings of State Route 14. The increased number of crossings would result in increased duration of Impact T-4. Mitigation Measure T-1a (Prepare Traffic Control Plans) includes measures to reduce potentially significant impacts from construction activities on emergency response to less-than-significant levels (**Class II**).

Disruption to Bus Transit Service (Criterion TRA5)

The reroute portion of Alternative 5 would have no affect on transit service. However, Alternative 5 is the same as the proposed Project in the Santa Clarita area. Therefore, overhead stringing activities that would require short-term road closures could disrupt up to three SCT bus routes (Routes 3, 7, and 503) and a number of local school bus routes (Impact T-4). Mitigation Measure T-4 (Avoid Disruption of Bus Service) is proposed to reduce potentially significant impacts to public and school bus routes to less-than-significant levels (**Class II**).

Disruption to Rail Traffic (Criterion TRA6)

As with the proposed Project, no portion of Alternative 5 would encroach on an existing freight or passenger railroad ROW. Therefore, there would be no impact on local rail operations associated with the construction of Alternative 5.

Impediment of Pedestrian Movements or Bike Paths (Criterion TRA7)

The reroute of Alternative 5 would have no effect on pedestrian movements or bike paths. However, Alternative 5 is the same as the proposed Project in the Santa Clarita area. Therefore, construction activities for Alternative 5 would have the same impact as the proposed Project on pedestrian and bicycle circulation by temporarily blocking established pedestrian and bicycle routes where the transmission line would cross over roads in the Santa Clarita area (Impact T-5). Mitigation Measure T-5 (Provide Temporary Pedestrian and Bicycle Access) is proposed to reduce potentially significant impacts to pedestrian movements and bike paths to less-than-significant levels (**Class II**).

Reduction in the Supply of Parking Spaces (Criterion TRA8)

Construction activities associated with Alternative 5 would not result in a reduction of the local parking space supply. Construction workers would park personal vehicles at the substation and marshaling yard sites (MM T-2). In addition, overhead transmission line construction activities would not temporarily eliminate existing parking spaces that would result in parking deficiencies. Therefore, as with the proposed Project, there would be no impact on parking supplies associated with the construction of Alternative 5.

Conflicts with Planned Transportation Projects (Criterion TRA9)

The route for Alternative 5 would cross the route of the planned Santa Clarita Cross-Valley Connector, designed by Caltrans and the City of Santa Clarita to reduce travel demand in the upper Santa Clara Valley area on freeways I-5 and SR-14. Therefore, as with the proposed Project, there is a potential that this alternative could conflict with the Santa Clarita Cross-Valley Connector project (Impact T-6). Mitigation Measure T-6 (Coordinate with Caltrans and the City of Santa Clarita to Avoid Conflicts with the Santa Clarita Cross-Valley Connector) is proposed to reduce potentially significant impacts related to conflicts between the Project and the Santa Clarita Cross-Valley Connector to less-than-significant levels (**Class II**).

Noticeable Deterioration of Road Surfaces (Criterion TRA10)

As with the proposed Project, there is a potential for unexpected damage to occur on features in road ROWs due to the operation of construction vehicles and equipment (Impact T-7). This would be potentially significant, but reduced to less-than-significant levels (**Class II**) with implementation of Mitigation Measure T-7 (Repair Damaged Road ROWs), which expands on SCE's proposed local road repair requirements included in APM TRA-5.

Adverse Effects to Aviation Activities (Criterion TRA11)

Alternative 5 would require double-circuit 500-kV towers within the existing Pardee-Vincent corridor between Mile 18.8 and Mile 37.2. As shown in Figure B.2-5, double-circuit 500-kV towers range in height between 175 and 220 feet above the ground surface, which could affect aviation activities (Impact T-8). However, pursuant to FAA guidelines, SCE would be required to submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the Manager of the FAA Air Traffic Division for review and approval of this alternative route. Adherence to FAA guidelines would ensure that operation of the alternative would not cause a significant impact to aviation activities (**Class III**).

Inconsistency with Regional and Local Transportation Plans (Criterion TRA12)

Impact T-10: Construction activities could be inconsistent with transportation plans.

Unlike the proposed Project or other proposed alternatives, the proposed Alternative 5 transmission line re-route would cross SR-14 at two separate locations. In its North County Combined Highway Corridors Study, LACMTA identifies a long range plan to improve SR-14 by constructing a new travel lane. The project would be inconsistent with the LACMTA plan if it were to place structures within the ROW of the planned improvement. Mitigation Measure T-10 described below is proposed to reduce significant impacts related to conflicts with the LACMTA North County Combined Highway Corridors Study (**Class II**).

Mitigation Measure for Impact T-10

T-10 Coordinate with Caltrans and the Los Angeles County MTA to Avoid Conflicts with Planned Improvements to SR-14. SCE shall coordinate project design with Caltrans and the Los Angeles County MTA to ensure that the transmission line is appropriately placed to avoid conflict with construction of a new travel lane on SR-14.

C.13.11 No Project/Action Alternative

Under the No Project/Action Alternative, the proposed transmission line would not be constructed and, therefore, the impacts associated with the proposed Project and alternatives described in Sections C.13.5 through C.13.11 above would not occur. As a result, under the No Project/Action alternative, no new construction traffic would be generated and road/lane closures would not occur.

However, as identified in Section B.4.6.2, in the absence of the proposed Project other actions would occur. Some wind projects may be postponed or cancelled, or other alternatives may be developed that would meet the RPS goal by 2010. SCE would need to accommodate the power load by upgrading existing transmission infrastructure or building new transmission facilities along a different alignment. Depending on the location of new energy projects, these projects may affect existing traffic and transportation conditions. The locations and development schedules for construction and operation of new power plants and transmission infrastructure cannot be predicted and, as such, it is impossible to identify new traffic and transportation impacts that would occur under the No Project/Action Alternative.

C.13.12 Impact and Mitigation Summary

Table C.13-9 presents a summary of the impacts and proposed mitigation measures for traffic and transportation.

Impact	Impact Significance					
	Proposed Project	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
T-1: Closure of roads to through traffic or reduction of travel lanes would result in substantial congestion.	Class II	Class II	Class II	Class II	Class II	Class II
	T-1a, T-1b	T-1a, T-1b	T-1a, T-1b	T-1a, T-1b	T-1a, T-1b	T-1a, T-1b
T-2: Construction traffic would result in congestion on area roadways.	Class II	Class II	Class II	Class II	Class II	Class II
	T-2	T-2	T-2	T-2	T-2	T-2
T-3: Construction activities could temporarily interfere with emergency response.	Class II	Class II	Class II	Class II	Class II	Class II
	T-1a	T-1a	T-1a	T-1a	T-1a	T-1a

Table C.13-9. Impact and Mitigation Summary – Traffic and Transportation						
	Impact Significance					
T-4: Construction activities could temporarily disrupt transit and school bus routes.	Class II	Class II	Class II	Class II	Class II	Class II
	T-4	T-4	T-4	T-4	T-4	T-4
T-5: Construction activities could temporarily interfere with the use of pedestrian/bicycle paths.	Class II	Class II	Class II	Class II	Class II	Class II
	T-5	T-5	T-5	T-5	T-5	T-5
T-6: Conflict with plans for a City of Santa Clarita connector road.	Class II	Class II	Class II	Class II	Class II	Class II
	T-6	T-6	T-6	T-6	T-6	T-6
T-7: Construction vehicles and equipment could damage road ROWs.	Class II	Class II	Class II	Class II	Class II	Class II
	T-7	T-7	T-7	T-7	T-7	T-7
T-8: Project transmission structures could present an aviation hazard.	Class III	No Impact	Class III	No Impact	Class III	Class III
	None	None	None	None	None	None
T-9: Underground construction activities would temporarily restrict access to properties.	No Impact	Class II	No Impact	No Impact	No Impact	No Impact
	None	T-9	None	None	None	None
T-10: Construction activities could be inconsistent with transportation plans.	No Impact	No Impact	No Impact	No Impact	No Impact	Class II
	None	None	None	None	None	T-10

Class I = Significant and unavoidable impact; Class II = Significant but mitigated to a less-than-significant level; Class III = Less-than-significant impact; Class IV = Beneficial impact.

C.13.13 Cumulative Effects

C.13.13.1 Geographic Extent

After construction, the proposed Project would have little transportation or traffic activity associated with it. Therefore, the only opportunity for cumulatively significant impacts to occur with other projects would be during construction of the proposed Project, making them temporally as well as spatially dependent. Therefore, the geographic extent for the analysis of cumulative traffic and transportation impacts is defined as the area up to one half mile from the proposed Project.

C.13.13.2 Existing Cumulative Conditions

The Santa Clarita area along the proposed Project route has experienced vast residential development in recent years that has cumulatively altered traffic congestion in the area. Arterial roadways in the Santa Clarita area such as Copper Hill Drive and McBean Parkway have experienced a rise in traffic congestion as a result of past and present residential development. It is anticipated that these and other roadways in the Santa Clarita area will continue to experience increased levels of traffic congestion as additional future residential developments are approved and implemented.

The growing populations in northern Los Angeles County have contributed to past and current projects within the ANF. Past utility projects such as transmission line corridors, power houses, and the Los Angeles Aqueduct have been constructed across NFS lands to serve the expanding communities in northern Los Angeles County. An increase in the developmental density surrounding the ANF also strains the capacity of the recreational resources on NFS lands. Recreational facilities such as roads, trails, campgrounds, and day use areas have been constructed to meet the demands of increased visitation to the ANF. Currently, development within the ANF has included trail construction and improvement; 15 campgrounds in the Santa Clara/Mojave Rivers Ranger District (north of Highway 14); and recreational residences along Bouquet Canyon, Lake Hughes, and San Francisquito. Despite this development, traffic volume on NFS roads remains low to moderate.

C.13.13.3 Cumulative Impact Analysis

The potential for traffic and transportation impacts of the proposed Project and alternatives described in Sections C.13.5 through C.13.11 to combine with the effects of other projects within the geographic scope of the cumulative analysis are described below.

- **Closure of roads to through traffic or reduction of travel lanes would result in substantial congestion (Impact T-1).** The rapid residential development in the Santa Clarita area has contributed to congestion on area roadways that would be crossed by the routes of the proposed Project and all of the alternatives. There are currently eight development projects scheduled within one-half mile of the proposed Project route, two of which are currently under construction and would likely be at least partially occupied when construction of the proposed Project begins. Traffic associated with these future residential developments would contribute to congestion on area roadways. Temporary roadway congestion resulting from lane closures associated with construction of the proposed Project (or any of the proposed alternatives) could combine with congestion resulting from past, present and future residential development to create a temporary cumulative significant impact (**Class I**).
- **Construction traffic would result in congestion on area roadways (Impact T-2).** Traffic volumes on most study area roadways are generally low to moderate, particularly those located outside of Santa Clarita. Rapid residential development in the Santa Clarita area has contributed to congestion on area roadways that would likely be traveled by construction-related traffic associated with the proposed Project (or any of the proposed alternatives). There are currently eight development projects scheduled within one-half mile of the proposed Project route, two of which are currently under construction and would likely be at least partially occupied when construction of the proposed Project begins. Mitigation Measure T-2 (Prepare Construction Transportation Plan) would reduce the number of construction-related vehicles required for the proposed Project, therefore reducing the potential for Project-related construction traffic to substantially contribute to a cumulative impact (**Class II**).
- **Construction activities could temporarily interfere with emergency response (Impact T-3).** Road and lane closures resulting from the proposed Project (or any of the proposed alternatives) could interfere with emergency response vehicles by lengthening the response time required for emergency vehicles passing through the construction zone. Congestion on area roadways in the Santa Clarita area from past, present, and future development could also lengthen the response time required for emergency vehicles in the area. If one or more of the future projects planned in the Santa Clarita area within one-half mile of the proposed Project were to require road or lane closures on the same days that the proposed Project would require road and/or lane closures, cumulatively significant impacts could occur (**Class I**).
- **Construction activities could temporarily disrupt transit and school bus routes (Impact T-4).** Road and lane closures resulting from the proposed Project (or any of the proposed alternatives) could disrupt bus service passing through the construction zone. If other projects required the use of the same public ROW at the same time as the proposed Project, the regulatory agency responsible for issuing the encroachment permit would ensure that work within a public road would not occur simultaneously with the proposed Project to avoid significant cumulative impacts (**Class III**).
- **Construction activities could temporarily interfere with the use of pedestrian/bicycle paths (Impact T-5).** Road and lane closures resulting from the proposed Project (or any of the proposed alternatives) could interfere with pedestrian and bicycle paths crossing through the construction zone in the ANF and Santa Clarita area. Impacts from the proposed Project (or any of the proposed alternatives) would be temporary, short term, limited to a small localized area, and reduced by Mitigation Measure T-5 (Provide Temporary Pedestrian and Bicycle Access), and would therefore not be cumulatively significant (**Class III**).
- **Conflict with plans for a City of Santa Clarita connector road (Impact T-6).** The Santa Clarita connector road is currently under construction. Mitigation Measure T-6 (Coordinate with Caltrans and the City of Santa Clarita) would eliminate the potential for a conflict with the new connector road. Furthermore, any potential conflict from other projects would also be required to be designed to avoid conflicts with the connector road. Therefore, impacts would not be cumulatively significant (**Class III**).
- **Construction vehicles and equipment could damage road ROWs (Impact T-7).** Any damage to area road ROWs caused by construction of the proposed Project (or any of the proposed alternatives) would be repaired within two months of completion of construction activities and therefore would not be cumulatively significant (**Class III**).

- **Project transmission structures could present an aviation hazard (Impact T-8).** The proposed Project and all proposed alternatives (except for Alternatives 1 and 3) include construction of towers up to 220 feet above the ground surface, which could affect aviation activities within the Santa Clarita area. Similar to the proposed Project, any future project would be required to adhere to FAA Air Traffic Division guidelines. Therefore, impacts would not be cumulatively significant (**Class III**).
- **Underground construction activities would temporarily restrict access to properties (Impact T-9).** Unlike the proposed Project and Alternatives 2 through 5, Alternative 1 involves underground construction activities that could potentially block access to side streets, property entrances and driveways. If other projects required the use of the same public ROW at the same time as the proposed Project, the regulatory agency responsible for issuing the encroachment permit would ensure that work within a public road would not occur simultaneously with the proposed Project to avoid significant cumulative impacts (**Class III**).
- **Construction activities could be inconsistent with transportation plans (Impact T-10).** Neither the proposed Project nor Alternatives 1 through 4 would be inconsistent with any applicable transportation plans. Unlike the proposed Project or Alternatives 1 through 4, Alternative 5 would cross SR-14. Constructing structures near SR-14 could conflict with planned improvements; however, such conflict would be prevented through implementation of Mitigation Measure T-10 (Coordinate with Caltrans and LACMTA to avoid conflicts with planned improvements to SR-14). In addition, future projects that may conflict with planned improvements would be required to implement similar measures. Therefore, impacts would not be cumulatively significant (**Class III**).

C.13.13.4 Cumulative Effects on National Forest System Lands

Traffic and Transportation impacts that may occur on NFS lands would include Impacts T-1, T-2, T-3, T-5, T-7, and T-9. The following is a discussion of the cumulative effects of the proposed Project and Alternatives 1 through 5 that could occur on NFS lands. With the exception of Impact T-7, Alternative 5 would have no traffic impacts on NFS lands and therefore would otherwise not contribute to cumulative traffic impacts on NFS lands.

- **Closure of roads to through traffic or reduction of travel lanes would result in substantial congestion (Impact T-1).** Traffic volumes on ANF roads are generally low. The current and future projects planned to be implemented in the ANF are not likely to substantially increase traffic volumes or congestion on ANF roads. The temporary roadway congestion resulting from lane closures associated with construction of the proposed Project (or proposed Alternatives 1 through 4) would be reduced to less than significant levels through implementation of Mitigation Measure T-1a (Prepare Traffic Control Plans) and would therefore not contribute to a cumulative impact.
- **Construction traffic would result in congestion on area roadways (Impact T-2).** Traffic volumes on ANF roads are generally low. The current and future projects planned to be implemented in the ANF are not likely to substantially increase traffic volumes or congestion on ANF roads. The temporary roadway congestion resulting from construction traffic related to the proposed Project (or proposed Alternatives 1 through 4) would be reduced to less than significant levels through implementation of Mitigation Measure T-2 (Prepare Construction Transportation Plan) and would therefore not contribute to a cumulative impact.
- **Construction activities could temporarily interfere with emergency response (Impact T-3).** Road and lane closures resulting from the proposed Project (or any of the proposed alternatives) could interfere with emergency response vehicles by lengthening the response time required for emergency vehicles passing through the construction zone. The current and future projects planned to be implemented in the ANF are not likely to substantially increase traffic volumes or congestion on ANF roads. Impacts resulting from the proposed Project (or any of the proposed alternatives) would be reduced through implementation of Mitigation Measure T-1a (Prepare Traffic Control Plans) and would not be cumulatively significant (**Class III**).
- **Construction activities could temporarily interfere with the use of pedestrian/bicycle paths (Impact T-5).** Road and lane closures resulting from the proposed Project (or any of the proposed alternatives) could interfere with pedestrian/bicycle paths crossing through the construction zone in the ANF. There are no past, present, or future projects that would occur simultaneously with the proposed Project to create cumulative impacts.

- **Construction vehicles and equipment could damage road ROWs (Impact T-7).** Any damage to ANF road ROWs caused by construction of the proposed Project (or any of the proposed alternatives) would be repaired within two months of completion of construction activities and therefore would not be cumulatively significant (**Class III**).
- **Underground construction activities would temporarily restrict access to properties (Impact T-9).** Unlike the proposed Project or Alternatives 2 through 4, Alternative 1 involves underground construction activities that could potentially block access to the Bouquet Canyon Stone Company, but would be reduced by Mitigation Measure T-9 (Provide continuous access to properties). There are no past, present, or future projects that would occur simultaneously with the proposed Project to create cumulative impacts.