

D.16 Transportation and Traffic

This section describes the affected environment for Transportation and Traffic in Section D.16.1 and presents the relevant regulations and standards in Section D.16.2. Sections D.16.3 through D.16.5 describe the impacts of the Proposed Project and the alternatives. Section D.16.6 presents the mitigation measures and mitigation monitoring requirements, and D.16.7 lists references cited.

D.16.1 Environmental Setting / Affected Environment

D.16.1.1 Regional Setting and Approach to Data Collection

The Proposed Project includes upgrades to existing 220 kV transmission lines between San Bernardino, Vista, and Devers Substations; equipment changes at seven substations; relocation of 66 kV subtransmission lines and 12 kV distribution lines; and installation of telecommunication lines and equipment. Of these activities, the most labor-, time-, and material-intensive activity would be the 220 kV upgrade.

The project study area includes unincorporated areas of Riverside and San Bernardino Counties and portions of the cities of Banning, Beaumont, Calimesa, Colton, Desert Hot Springs, Grand Terrace, Loma Linda, Palm Springs, Rancho Cucamonga, Redlands, San Bernardino, and Yucaipa. The Proposed Project component in the City of Rancho Cucamonga is limited to improvements within the Mechanical Electrical Equipment Room (MEER) at Etiwanda Substation. The work within this existing facility would require a limited number of workers and deliveries and would not have the potential to affect traffic in the City of Rancho Cucamonga; therefore, the City of Rancho Cucamonga is not included for further discussion.

Data for the transportation network were collected and analyzed based on alignment maps provided by SCE and other maps from various reports and websites from the state and local agencies. Traffic volume data were obtained from agency websites and reports. Lane information was obtained from aerial photographs and staging/construction yard locations were identified by the applicant (SCE, 2014).

Surface Transportation

Traffic would be generated on local and regional roadways due to the movement of construction crews, equipment, and materials required to remove and install towers and poles and to install electric conductor and telecommunications cable. In some instances, temporary road or traffic lane closures and traffic controls would be required, such as during stringing of overhead conductors and ground wire across roads, movement of large equipment on public roads, and trenching or boring in locations where sections of subtransmission and distribution lines and telecommunications lines would be placed underground.

The 220 kV transmission line upgrades proposed under the West of Devers Upgrade Project would occur within an existing right-of-way (ROW) for most of the alignment. Segment 1 of the Proposed Project, extending from San Bernardino Substation in Redlands to San Bernardino Junction southeast of Loma Linda, would pass through Redlands and Loma Linda and would cross over local roads and Interstate 10 (I-10). Segment 2, from Vista Substation in Grand Terrace to San Bernardino Junction, would pass through Grand Terrace, Colton, and Loma Linda, crossing over local roads and I-215. Segment 3, extending from San Bernardino Junction in San Bernardino County to El Casco Substation in Riverside County, would be in existing ROW in the hills southwest of San Timoteo Canyon Road, passing through Redlands and unincorporated areas of San Bernardino and Riverside Counties. Segment 4, extending east from El Casco Substation, would cross I-10 and as well as local roads in the cities of Calimesa, Beaumont and Banning. Segment 5 would be on reservation lands of the Morongo Band of Mission Indians land east of Banning. Here a two-mile section of the existing ROW would be abandoned and replaced by ROW

nearer I-10. The route in this segment would cross or parallel a few lightly travelled local roads. Segment 6 would extend from the east side of the reservation to Devers Substation, passing through unincorporated Riverside County and BLM land and crossing a few lightly travelled local roads and State Route 62 (SR-62) (Twenty-nine Palms Highway) north of I-10.

In addition to the 220 kV upgrades, the Proposed Project would include relocating two 66 kV subtransmission lines from the existing corridor between San Bernardino Substation and San Bernardino Junction. The 66 kV lines would be relocated to new poles installed along public roads or utility ROW, with one section leading in to Timoteo Substation being located underground. As well, the Proposed Project would relocate two 12 kV distribution lines. (See Figure B-13, Proposed Relocated Subtransmission and Distribution Line Routes.)

Fiber optic telecommunications cable would be located both on utility poles and in underground conduits. The three primary lines would be between San Bernardino Substation and an existing cable located on West Redlands Boulevard, along San Timoteo Canyon Road, and between Maraschino Substation in Beaumont to an existing communications line on the Devers-Valley line. Various communications facilities would be connected within existing substations as well (see Figures B-15a through B-15e, Proposed Telecommunication Routes.). Section B, Description of Proposed Project, provides a detailed discussion of all project elements.

Air Transportation

The use of helicopters in transmission line construction has increased over the past decade. Although SCE states that the majority of deconstruction (removal) of existing facilities would be performed using ground-based equipment (i.e., cranes and haul vehicles), the utility anticipates using light and medium duty helicopters (such as the Bell 500 and Kaman Kmax) during removal of existing facilities from some sites (SCE, 2014). In those circumstances, transmission hardware, poles, tower structural assemblies, and conductors would be flown to designated laydown areas, from where they would be transported via road to their final destinations. Helicopters also would be used to stage materials at and near work sites and to transport personnel required for the deconstruction work. SCE anticipates that during these operations helicopters may land in approved disturbance areas, including tower and pole sites, pull sites, and access or spur roads.

In its Preliminary Helicopter Use Plan (see Attachment D.16-1 at the end of this section), SCE has indicated that it does not anticipate using helicopter-based construction. However, it does state that helicopters would be used during conductor stringing and during installation of marker balls on conductors, where these are required. Also, SCE acknowledges that helicopters may be employed in other aspects of construction. The decision on whether and where to use helicopters would be dependent on final engineering and the selected contractor.

During ongoing regular operations after construction, helicopters would be used for line and ROW inspections and insulator washing.

D.16.1.2 Environmental Setting by Segment

Major regional highways in the project vicinity include Interstate (I) highways and State Routes (SR). These are I-10, I-215, SR-60, SR-62, SR-79, ~~and SR-111~~, and SR-243. Average daily traffic on various segments of these highways is shown in Table D.16-1. These regional highways would be used by construction workers and materials delivery trucks to reach assembly points, yards, and work sites along the project's length.

Table D.16-1. Average Daily Traffic on Highways

City	Highway	Roadway Section	Average Daily Traffic
Banning	I-10	Between Hargrave Street and SR-243	116,000
Beaumont	I-10	Between Oak Valley Road and Cherry Valley Avenue	91,000
	SR-60	Between I-10 and Jack Rabbit Trail	44,500
	SR-79	Between California Avenue and Gilman Springs Road	28,500
Calimesa	I-10	Between Cherry Valley Boulevard and Singleton Road	99,000
Colton	I-215	South of I-10	170,000
Desert Hot Springs	SR-62	Between Pierson Boulevard and Indian Canyon Drive	22,000
Grand Terrace	I-215	Between Barton Road and La Cadena Drive	153,000
Loma Linda	I-10	Between Mountain View Avenue and Waterman Avenue	194,000
Palm Springs	I-10	Between SR-111 and Indian Avenue	79,000
	SR-111	Between I-10 and Snow Creek Road	13,200
Redlands	I-10	Between Mountain View Avenue and California Avenue	190,000
Yucaipa	I-10	Between Yucaipa Boulevard and Wildwood Canyon Road	105,000
County of Riverside	I-10	Between SR-111 and Hargrave Street	116,000
	SR-79	Between California Avenue and Gilman Springs Road	28,500
	SR-62	Between I-10 and Pierson Boulevard	19,000
San Bernardino	I-10	Between Mountain View Avenue and Tippecanoe Avenue	194,000

I = Interstate SR = State Route

Source: SEC 2013, PEA Table 4.16-1, from California Department of Transportation: <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/2010all/index.html>.

In addition to regional highways, major and primary arterials in the region would provide access to project sites. These are identified in Table D.16-2, Average Daily Traffic on Major and Primary Arterials. These routes would provide vehicle access to worker parking/assembly points, construction yards, and work sites.

Table D.16-2. Average Daily Traffic on Major and Primary Arterials

City	Arterial	Segment	Average Daily Traffic
Banning	Highland Springs	North of Wilson Street	8,633
	Wilson Street	Between Highland Springs Avenue and Hathaway Street	12,544
	Ramsey Street	Between Hargrave Street and Hathaway Street	9,423
	Sunset Avenue	Between Ramsay Street and Gilman Avenue	14,782
	8th Street	Between Wilson Street and Ramsey Street	10,513
	Hargrave Street	Between Wilson Street and I-10	10,823
Beaumont	Oak Valley Road	Between I-10 and Oak View Drive	5,400
	14th Street	Between Oak View Drive and Highland Springs Road	5,400
	San Timoteo Canyon Road	Between I-10 and Palmer Avenue	5,400
	Highland Springs Road	Between I-10 and Brookside Avenue	11,800
	Beaumont Avenue	Between Oak Valley Parkway and Cougar Way	12,500
	Brookside Avenue	Between Highland Springs Avenue and I-10	1,000

Table D.16-2. Average Daily Traffic on Major and Primary Arterials

City	Arterial	Segment	Average Daily Traffic
Calimesa	San Timoteo Canyon Road	Between I-10 and Palmer Avenue	4,400
	Calimesa Boulevard	Between Singleton Road and Cherry Valley Avenue	7,300
	Singleton Road	North of Woodhouse Road	1,300
	Desert Lawn Road	Between Champions Road and Palmer Avenue	850
Desert Hot Springs	Pierson Boulevard	Between SR-62 and Indian Avenue	2,100
	Mission Lakes Boulevard	Between SR-62 and Indian Avenue	2,400
Loma Linda	Redlands Boulevard	Between Mountain View Avenue and Waterman Avenue	21,000
	Anderson Street	Between Barton Road and I-10	24,400
	Mountain View Avenue	Between Barton Road and I-10	24,000
	Barton Road	Between Waterman Avenue and Mountain View Avenue	24,500
Redlands	San Timoteo Canyon Road	Between Alessandro Road and Live Oak Canyon Road	20,000
	San Bernardino Avenue	Between Mountain View Avenue and California Street	33,000
	Redlands Boulevard	Between Mountain View Avenue and California Street	39,000
Yucaipa	Yucaipa Boulevard	Between I-10 and Oak Glen Road	47,000
	Oak Glen Road	Between I-10 and Yucaipa Boulevard	24,000
County of Riverside	Cherry Valley Boulevard	Between I-10 and Highland Springs Avenue	5,100

I = Interstate SR = State Route
Source: SCE 2013, PEA Table 4.16-2

Heavy vehicles use interstate highways as well as a network of designated regional and local truck routes. Table D.16-3, Regional and Local Truck Routes, identifies truck routes in the project study area. Based on the road network, it appears access points to all reaches of the Proposed Project are accessible from the interstate highway system and regional/local truck routes.

Beginning at San Bernardino and Vista Substations and ending at Devers Substation, the environmental setting for Transportation and Traffic is described below for each of the six project segments.

Table D.16-3. Regional and Local Truck Routes

City	Route	Roadway Section
Banning	I-10	Entire
	Highland Springs Avenue	North of Wilson Street
	Wilson Street	Between Highland Springs Avenue and Hathaway Street
	Ramsey Street	Between Hargrave Street and Hathaway Street
	Hathaway Street	Between Ramsay Street and Morongo Road
	Sunset Avenue	Between Ramsay Street and Gilman Avenue
	8th Street	Between Wilson Street and Ramsay Street
	Hargrave Street	Between Wilson Street and I-10

Table D.16-3. Regional and Local Truck Routes

City	Route	Roadway Section
Beaumont	I-10	Entire
	SR-60	Entire
	SR-79	Entire
	Oak Valley Road	Between I-10 and Oak View Drive
	14th Street	Between Oak View Drive and Highland Springs Avenue
	Highland Springs Road	Between I-10 and Brookside Avenue
	San Timoteo Canyon Road	Between I-10 and Palmer Avenue
	Oak Valley Parkway	Between Beaumont Avenue and Highland Springs Avenue
	Beaumont Avenue	Between Oak Valley Parkway and Cougar Way
Brookside Avenue	Between Highland Springs Avenue and I-10	
Calimesa	I-10	Entire
	San Timoteo Canyon Road	Between I-10 and Palmer Avenue
	Calimesa Boulevard	Between Singleton Road and Cherry Valley
	Singleton Road	North of Woodhouse Road
	Desert Lawn Road	Between Champions Road and Palmer Avenue
Colton	I-215	Entire
Desert Hot Springs	SR-62	Between Pierson Boulevard and Indian Canyon Drive
	Pierson Boulevard	Between SR-62 and Indian Avenue
	Mission Lakes Boulevard	Between SR-62 and Indian Avenue
Grand Terrace	I-215	Entire
	Barton Road	Between Reche Canyon Road and I-215
	Mt. Vernon Avenue	Between I-215 and Van Buren Street
	Michigan Avenue	Between Barton Road and Van Buren Street
	La Cadena Drive	Between I-215 and Agua Mansa Road
Loma Linda	I-10	Entire
	Redlands Boulevard	Between Mountain View Avenue and Waterman Avenue
	Anderson Street	Between Barton Road and I-10
	Mountain View Avenue	Between Barton Road and I-10
	Barton Road	Between Mountain View Avenue and Waterman Avenue
Palm Springs	I-10	Entire
	SR-111	Entire
Redlands	I-10	Entire
	San Timoteo Canyon Road	Between Alessandro Road and Live Oak Canyon Road
	San Bernardino Avenue	Between Mountain View Avenue and California Street
	Redlands Boulevard	Between Mountain View Avenue and California Street
County of Riverside	I-10	Entire
	SR-60	Entire
	SR-79	Entire
	SR-243	Entire
	Cherry Valley Boulevard	Between I-10 and Highland Springs Avenue
San Bernardino	I-10	Entire
	I-215	Entire
Yucaipa	I-10	Entire

I = Interstate SR = State Route

Source: SCE 2013, PEA Table 4.16-3, from City of Banning General Plan, 2006; City of Loma Linda General Plan, 2009; City of Beaumont General Plan, 2007; City of Redlands General Plan, 1997; City of Calimesa General Plan, 1994; City of Palm Springs General Plan, 2007; County of Riverside General Plan, 2003; City of Grand Terrace General Plan, 2010; City of Desert Hot Springs General Plan, 2000.

D.16.1.2.1 Segment 1: San Bernardino

Roadways crossed by the proposed route between San Bernardino Substation and San Bernardino Junction are listed in Table D.16-4. The only regional route in this segment is I-10, which is under the jurisdiction of Caltrans. All of the other roadways crossed are under the jurisdiction of the cities of Loma Linda or Redlands. Mileposts are approximate.

Table D.16-4. Public Roadways along the Proposed Route – Segment 1: San Bernardino

Roadway	Jurisdiction	Lanes	Milepost	Orientation of Route
San Bernardino Avenue	Redlands	4	SB-0.1	Overhead Crossing
Almond Avenue	Redlands	4	SB-0.3	Overhead Crossing
Lugonia Avenue	Redlands	4	SB-0.6	Overhead Crossing
Interstate 10	Caltrans	8	SB-0.85	Overhead Crossing
Business Center Dr	Loma Linda	2	SB-.93	Overhead Crossing
Redlands Boulevard	Loma Linda	4	SB-1.1	Overhead Crossing
Mission Road	Loma Linda	2	SB-1.5	Overhead Crossing
Van Leuven Street	Loma Linda	2	SB-1.6	Overhead Crossing
Glen Summer Dr	Loma Linda	2	SB-1.7	Overhead Crossing
Barton Road	Loma Linda	4	SB-2.1	Overhead Crossing
Lawton Avenue	Loma Linda	2	SB-2.35	Overhead Crossing
Hinckley Street	Loma Linda	2	SB-2.5	Overhead Crossing
Beaumont Avenue	Loma Linda	4	SB-2.8	Overhead Crossing

Source: Aspen review of Google Earth maps.

The Burlington Northern Santa Fe Railway would be crossed by the route at MP SB-0.75 and the Union Pacific Railroad would be crossed by the proposed route at MP SB-1.9. OmniTrans provides fixed-route bus/transit services on 27 local routes in San Bernardino County (OmniTrans, 2014). The project alignments cross Routes 8 and 19 on Redlands Boulevard and Route 9 on Barton Road in Loma Linda and Route 325 on Barton Road in Grand Terrace. In addition, Greyhound uses I-10 for bus service between Indio and San Bernardino (Greyhound, 2014). San Bernardino International Airport is located approximately 1 mile north of the San Bernardino Substation. Heliports at the main Loma Linda University Medical Center and its East Campus are located near Barton Road, approximately 1.4 miles and 0.7 miles west of the alignment, respectively.

In addition to the 220 kV line upgrades, SCE would relocate 66 kV subtransmission lines and 12 kV distribution lines to overhead poles and underground conduits in order make room for the 220 kV upgrades in the ROW south of San Bernardino Substation. The 66 kV lines would be relocated to new poles along public roads and utility ROWs, except for one section leading into Timoteo Substation that would be located underground. The poles for the 66 kV circuit to Timoteo Substation would be installed along West San Bernardino Avenue, Almond Avenue, Research Drive, West Lugonia Avenue, and Bryn Mawr Avenue. At Redlands Avenue, this line would be installed underground before entering Timoteo Substation on Mountain View Avenue. A fiber optic communications cable would be co-located with this 66 kV line. The second 66 kV line would extend on new poles from San Bernardino Substation along West San Bernardino Avenue to the ROW connecting to Almond Avenue. This route would continue along Almond Avenue to Nevada Street then south along Nevada Street to Citrus Avenue, before turning south on Iowa Street to an interconnection with an existing line at Barton Road.

In Loma Linda, the two relocated 12 kV distribution lines would be underground in Mission Road, from the Segment 1 220 kV ROW to California Street, and would continue south underground in California

Street to Barton Road. One of the lines would then extend overhead on existing 66 kV poles along Burton Road and Mayberry Street, cross the railroad line, and continue along the road to the Segment 1 220 kV corridor.

Two staging yards would be located in Segment 1, both in the vicinity of San Bernardino Substation. One, Mountain View No. 1 Yard, is a previously disturbed 2.8-acre site in Redlands, west of Mountain View Avenue and north of San Bernardino Avenue. The other, Lugonia Yard, is a 3.9-acre site south of Lugonia Avenue adjacent to the Segment 1 corridor in Redlands that has been used previously as a staging area for a pipeline project.

D.16.1.2.2 Segment 2: Colton and Loma Linda

Roadways between Vista Substation and San Bernardino Junction are listed in Table D.16-5. The only regional route in this area is I-215, which is under Caltrans jurisdiction. The local roadways crossed are under the jurisdiction of San Bernardino County, Colton, or Grand Terrace.

Table D.16-5. Public Roadways along the Proposed Route – Segment 2: Colton and Loma Linda

Roadway	Jurisdiction	Lanes	Milepost	Orientation of Route
Interstate-215	Caltrans	6	0.5	Overhead Crossing
Mt. Vernon Avenue	Grand Terrace	4	0.6	Overhead Crossing
E. Barton Road	Colton	4	1.2	Overhead Crossing
Reche Canyon Road	San Bernardino County	2	2.1	Overhead Crossing

Source: Aspen review of Google Earth maps.

The project alignment crosses two bus routes, OmniLink’s Route 325 on Barton Road in Grand Terrace and Riverside Transit Authority’s Route 14, providing bus service to the area via I-215 and I-10 (RTA, 2014).

Heliports at the Loma Linda University Medical Center and its East Campus are located near Barton Road, 0.9 miles north of the alignment.

One staging yard would be located in Segment 2. The 4.4-acre Grand Terrace Yard would be at the northeast corner of Mt. Vernon Avenue and Canal Street in Grand Terrace. The vacant site is a previously disturbed utility corridor property.

D.16.1.2.3 Segment 3: San Timoteo Canyon

Roadways located along Segment 3 of the transmission line between San Bernardino Junction and El Casco Substation are listed in Table D.16-6. The roadways are under the jurisdiction of Riverside County, the City of Redlands, or San Bernardino County. A number of dirt access roads and trails in the hills between San Bernardino Junction and El Casco Substation are crossed by the ROW; these but are not listed in Table D.16-3.

Table D.16-6. Public Roadways along the Proposed Route – Segment 3: San Timoteo Canyon

Roadway	Jurisdiction	Lanes	Milepost	Orientation of Route
Palomares Road	San Bernardino County/Redlands	2	7.2	Overhead Crossing
Smiley Rd/Lisa Marie Ln	San Bernardino County/Redlands	2	9	Overhead Crossing
Live Oak Canyon Road	Riverside County	dirt	9.3	Overhead Crossing
Redlands Boulevard	Riverside County	2	10.8	Overhead Crossing

Source: Aspen review of Google Earth maps.

A new communications line would be installed on existing poles along San Timoteo Canyon Road, from an existing line located approximately 3,000 feet north of Alessandro Road to El Casco Substation. Two staging yards would be located in Segment 3. The 17-acre previously disturbed vacant San Timoteo Yard is located along San Timoteo Canyon Road in Riverside County. Nearby is the 13-acre Poultry Yard located on previously disturbed land at MCM Poultry.

D.16.1.2.4 Segment 4: Beaumont and Banning

Roadways located along the segment of the proposed transmission line through the cities of Calimesa, Beaumont, and Banning are listed in Table D.16-7. The only regional route crossed this segment is I-10, which is under the jurisdiction of Caltrans. The local roadways are under the jurisdiction of Riverside County, or the cities of Calimesa, Banning, or Beaumont.

Table D.16-7. Public Roadways along the Proposed Route – Segment 4: Beaumont and Banning

Roadway	Jurisdiction	Lanes	Milepost	Orientation of Route
San Timoteo Canyon Rd	Riverside County/Calimesa	2	16	Overhead Crossing
Palmer Ave			17.8	Overhead Crossing
Cherry Valley Blvd		4	18	Overhead Crossing
Plantation Dr	Calimesa	2	18.5	Overhead Crossing
Desert Lawn Dr	Calimesa	2	18.6	Overhead Crossing
Brookside Ave	Calimesa	4	18.7	Overhead Crossing
Interstate-10	Caltrans	6	18.9	Overhead Crossing
N Deodar Dr		2	19.3	Overhead Crossing
S Monte Verde Dr		2	19.5	Overhead Crossing
Dalea Way		2	19.6	Overhead Crossing
Snowberry Rd		2	19.65	Overhead Crossing
Bentwood Rd		2	19.9	Overhead Crossing
Fairway Dr		2	20.3	Overhead Crossing
Oak View Drive	Beaumont	2	20.7	Overhead Crossing
Beaumont Avenue	Riverside County/Beaumont	4	21.6	Overhead Crossing
Palm Avenue	Beaumont	2	22	Overhead Crossing
Cherry Avenue	Beaumont	2	22.3	Overhead Crossing
Highland Springs Ave	Banning/Beaumont	2	23.3	Overhead Crossing
14th Street	Banning/Beaumont	2	24.9	Overhead Crossing and Parallel
Sunset Avenue	Banning	2	25	Overhead Crossing
Fraser St	Banning	Dirt	26.1	Overhead Crossing
Bluff Street	Banning	2	27.3	Overhead Crossing

Source: Aspen review of Google Earth maps.

The Union Pacific Railroad runs parallel to San Timoteo Canyon Road just east of El Casco Substation and is crossed by the two sections of the proposed transmission line route located north and south of the substation. A heliport is located at San Gorgonio Memorial Hospital on Highland Springs Avenue in Banning, approximately 1 mile south of the alignment.

A new communications line would be installed between Maraschino Substation on Minnesota Avenue in Beaumont to a connection with the Devers-Valley line on Highland Springs Avenue. The line would be on existing poles from the substation to Beaumont Avenue, then underground in East 1st Street and Highland Springs Avenue, where it would again transition aboveground near Potrero Boulevard and continue overhead to the interconnection south of Breckinridge Avenue. Ground disturbance would be required

on Highland Springs Road between East 1st Street and Potrero Boulevard and between Breckinridge Avenue and the splice point on Highland Springs Road, approximately 2,000 feet to the south.

Two staging yards would be located in Segment 4 near I-10 and SR-79. The 3.9-acre Beaumont 1 Yard is at the northeast corner of South California Avenue and E. Third Street in Beaumont. This graveled, fenced property has been used as a staging area for a previous electrical project. Nearby, the 5-acre Beaumont 2 Yard located at 853 E. Third Street east and Maple Avenue in Beaumont also has been a staging area for a previous electrical project.

D.16.1.2.5 Segment 5: Morongo Tribal Lands and Surrounding Areas

Roadways located along Segment 5 are listed in Table D.16-8. This segment begins just east of Bluff Street in Banning and continues east in open countryside north of an existing quarry operation, where it enters reservation land. On the reservation, the alignment would depart from the existing ROW and enter a new ROW extending across Morongo Road and then continuing parallel to I-10 to Malki Road, where it would rejoin the existing ROW and continue to Rushmore Avenue, where it would exit Morongo tribal lands.

Table D.16-8. Public Roadways along the Proposed Route – Segment 5: Morongo Tribal Lands and Surrounding Areas

Roadway	Jurisdiction	Lanes	Milepost	Orientation of Route
Morongo Road	Morongo Indian Reservation	2	29	Overhead Crossing
Malki Rd	Morongo Indian Reservation	2	30.9	Overhead Crossing
Martin Rd	Morongo Indian Reservation	2	30.9-31.9	Parallel
Millard Pass	Morongo Indian Reservation	2	31.9	Overhead Crossing
Millard Canyon Rd	Morongo Indian Reservation	dirt	33.9	Overhead Crossing
Rushmore Ave	Riverside County	2	35.9	Overhead Crossing

Source: Aspen review of Google Earth maps.

The Banning Municipal Airport is south of I-10, about 0.6 miles south of the proposed 220 kV alignment. There were reportedly an average of 88 aircraft operations per week (February 2013–March 2014) at the airport, with 72 percent being transient general aviation and 28 percent being local general aviation (Banning, 2014). Forty single engine airplanes are based at the airport (Banning, 2014).

~~Two-Three~~ staging yards would be located in Segment 5 near I-10. The 21-acre Matich Yard is located at the southeast corner of E. Theodore Street and N. Hathaway and is previously disturbed. The 30-acre Hathaway 1 Yard located at 600 N. Hathaway Street in Banning is a previously disturbed, fenced property. Nearby, the 15.7-acre Hathaway 2 Yard on the northeast side of E. Williams Street and North Hathaway Street in Banning is an unimproved property.

D.16.1.2.6 Segment 6: Whitewater and Devers

The roadways that would be affected by the Proposed Project in Segment 6, between Rushmore Avenue and Devers Substation, are listed in Table D.16-9. The only regional route in this area is State Route 62, which is under the jurisdiction of Caltrans. Except for State Route 62, which is under Caltrans jurisdiction, all of the other roadways are under the jurisdiction of Riverside County. One service road for the alignment is on BLM land.

Table D.16-9. Public Roadways along the Proposed Route – Segment 6: Whitewater and Devers

Roadway	Jurisdiction	Lanes	Milepost	Orientation of Route
Kimdale Drive	Riverside County	dirt	37.5	Overhead Crossing
Cottonwood Road	Riverside County	2	38.1	Overhead Crossing

Table D.16-9. Public Roadways along the Proposed Route – Segment 6: Whitewater and Devers

Roadway	Jurisdiction	Lanes	Milepost	Orientation of Route
Desert View Avenue	Riverside County	2	38.8	Overhead Crossing
Whitewater Canyon Rd	Riverside County	2	41.3	Overhead Crossing
Rock Mine Road	Riverside County	dirt	41.9	Overhead Crossing
16th Avenue	Riverside County	dirt	42-45	Parallel
Windhaven Rd	Riverside County	dirt	42.9	Overhead Crossing
Painted Hills Road	Riverside County	dirt	43	Overhead Crossing
Ocotillo Rd	Riverside County	dirt	43.1	Overhead Crossing
Country View Rd	Riverside County	dirt	43.2	Overhead Crossing
Marion Avenue	Riverside County	2	43.3	Overhead Crossing
Vernon Road	Riverside County	2	43.6	Overhead Crossing
Desert View Road	Riverside County	dirt	43.7	Overhead Crossing
Seeley Street	Riverside County	2	43.8	Overhead Crossing
State Route 62	Caltrans	4	43.9	Overhead Crossing
Worsley Road	Riverside County	2	44	Overhead Crossing
Power Line Rd	Riverside County	dirt	44-45	Parallel
Diablo Road	Riverside County	dirt	44.8	Overhead Crossing

Source: Aspen review of Google Earth maps.

SCE maintains a heliport adjacent to Devers Substation. One staging yard would be located in Segment 6: the fenced and graveled 9.5-acre Devers Yard located east of SCE’s Devers Substation. The yard currently is used as a staging area for another electrical project.

D.16.1.3 Environmental Setting for Connected Actions

Desert Center Area. Interstate 10 is a major interstate route connecting southern California with Arizona and point west; roads in the Desert Center area are lightly travelled. In the Desert Center area, I-10 has two lanes of travel in each direction. The Annual Average Daily Traffic for I-10 in the area was 25,000 in 2010. All other roads in the area are lightly travelled, with level of service A. SR-177 is a predominantly north-south road that provides access from Kaiser Road to I-10. It is also known as Desert Center Rice Road. It has one lane of travel in each direction. Kaiser Road has one lane of travel in each direction and a centerline stripe. It is a predominantly north-south road with a southern terminus at SR-177 in Desert Center and a northern terminus at the Eagle Mountain Mine. Several other paved and unpaved/unmaintained roads are found in the vicinity. There are no local bus routes, bicycle routes, or railroads in the area.

Blythe Area. Interstate 10 is the major route through the Blythe area where solar projects would be located. It has intersections with two local roads, Neighbours Boulevard (SR 78), east of the Blythe Airport, and Mesa Drive at the airport. The next interchange with I-10 is at Wiley’s Well Road, 10 miles west of the airport. Access to any solar project in the area would be from these interchanges along limited local paved and unpaved roads. Remote areas would be accessed by existing or new unpaved roads. As in the Desert Center area, local roads are lightly travelled. There is limited bus transit service.

D.16.2 Applicable Regulations, Plans, and Standards

Construction of the Proposed Project could potentially affect traffic and congestion, transportation ROWs, property access, physical conditions of roads, and parking. Therefore, it would be necessary for

the Applicant and/or the construction contractor to obtain encroachment permits or similar legal agreements from the agencies or entity responsible for each affected roadway or transportation ROW. In addition, as part of the overall Special Use Permit application process, the Applicant would be required to obtain approval for encroachments on Bureau of Land Management (BLM) and other landowner roads.

D.16.2.1 Federal

14 CFR Part 77 – Safe, Efficient Use, and Preservation of the Navigable Airspace. Construction of a project could potentially impact aviation activities if a structure or equipment were positioned such that it would be a hazard to navigation. The Federal Aviation Administration (FAA) has established reporting requirements for construction or alterations around airport and heliport facilities that meet certain criteria regarding final height above ground level and penetration of an imaginary conical surface extending out from the air facility. With regard to aviation safety, Subpart B, Section 77.9 of the regulations indicates that for areas around airports having runways longer than 3,200 feet, if any construction that is more than 200 feet above ground level or results in an object penetrating an imaginary surface extending outward and upward at a ratio of 100 to 1 from a public or military airport runway out to a horizontal distance of 20,000 feet (approximately 3.78 miles), an applicant is required to submit FAA Form 7460–1, Notice of Proposed Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area for review and approval of the project. For areas around heliports, this same requirement applies to any construction that is more than 200 feet above ground level or would penetrate an imaginary surface extending outward and upward at a ratio 25 to 1 from a public or military heliport out to a horizontal distance of 5,000 feet (FAA, 2014).

Advisory Circular AC-133-1A. Advisory Circular AC-133-1A: Rotorcraft External-Load Operations in Accordance with Federal Aviation Regulations Part 133, requires a helicopter pilot to have a FAA External-Load Operator Certificate in order to engage in external load operations.

D.16.2.2 State

California Vehicle Code. The California Vehicle Code (CVC) includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways; safe operation of vehicles; and the transportation of hazardous materials.

California Streets and Highway Code. The California Streets and Highway Code regulates the care and protection of state and county highways, and has provisions for the issuance of permits. Where the Proposed Project would include activities related to the placement of towers, poles, or lines within, under, or over a Caltrans ROW, an encroachment permit must be obtained. To obtain an encroachment permit, all other statutory requirements, including environmental documentation, must be complied with, and applicants must complete a Standard Encroachment Permit Application (TR-0100) with, supporting documentation to the appropriate District Encroachment Permits Office having jurisdictional authority over the proposed encroachment site.

D.16.2.3 Local

Counties and Cities

In California, on non-federal and non-tribal lands, the California Public Utilities Commission (CPUC) has jurisdiction over the siting and design of the Proposed Project because the CPUC regulates and authorizes the construction of investor-owned public utility (IOU) facilities. Although such projects are exempt from local land use and zoning regulations and permitting, General Order (GO) No. 131-D, Sec-

tion III.C requires “the utility to communicate with, and obtain the input of, local authorities regarding land-use matters and obtain any nondiscretionary local permits.” Appendix 9 (Policy Screening Report) identifies county and city plans and policies regarding Transportation and Traffic and other resources of concern to planners. The Appendix indicates policies that are potentially applicable to the Proposed Project and whether the project would be consistent with the plan or policy. These policies are numerous and are not repeated here.

Morongo Tribal Land

The use of the Morongo trust lands is subject to approval by the Morongo Band of Mission Indian’s general membership, which consists of all enrolled adult voting members. The Proposed Project would traverse approximately 8 miles of the tribal trust lands east of Banning. Approximately 2 miles of new corridor to replace a section of the existing ROW would be established from near the western boundary of the Morongo tribal lands to Malki Road, otherwise the Proposed Project would use the existing transmission ROW.

The Morongo Band’s general membership has voted to approve the Bureau of Indian Affairs’ grants to SCE of the rights-of-way and easements necessary for SCE to continue operating its existing 220 kV facilities on the Morongo reservation and to replace and upgrade those facilities with the WOD Project. The approval of these right-of-way grants and easements includes relocating approximately 3 miles of the line west of Malki Road into a new corridor closer to I-10. Therefore, the existing corridor, as modified, would be consistent with all applicable tribal laws.

D.16.3 Environmental Impacts of the Proposed Project

D.16.3.1 Approach to Impact Assessment

The assessment of traffic- and transportation-related impacts from the Proposed Project considered existing surface and transportation facilities in the project vicinity, including road use (traffic levels, pedestrian/bicycle use), public services relying on these facilities (transit and emergency vehicles), rail facilities crossed, access to adjacent properties from roads, and location of airport and heliport facilities. Also considered was the impact of helicopter use during construction. It is unknown when and where project-related traffic would occur on specific roads; therefore, a qualitative approach was taken to assess the impacts of the Proposed Project on traffic and transportation. This was based on the relative volume of current traffic on roads as compared to anticipated levels of project-related traffic, the distribution of work sites throughout the study area, and the nature and location of activities that could require road or lane closures. For air transportation (helicopter use), consideration was given to the location of construction yards from which flights would originate, the carrying of external loads, and the types of work that may involve helicopter use. Helicopter use would have potential impacts on other resources, such as Biological Resources, Air Quality, and Noise. These are addressed in those separate resource sections of the EIR.

D.16.3.1.1 Applicant Proposed Measures

Table D.16-10 presents the Applicant Proposed Measures that SCE has committed to implementing during construction and operation of the Proposed Project. If revision or expansion of any APM is found to be required based on the analysis in this EIR, those changes are explained in Section D.16.3.3 (Impact Analysis).

Table D.16-10. Applicant Proposed Measures – Transportation

APM	Description
APM TRANS-1	SCE would prepare a project specific helicopter use plan to describe anticipated helicopter activities. The helicopter plan will include information related to the types of activities to be conducted by helicopters, locations of and activities to be conducted at helicopter yards, flight and data management procedures, and safety information.

D.16.3.2 CEQA Significance Criteria

The significance criteria for transportation and traffic impacts are based on the CEQA Guidelines Appendix G Checklist and on comments received during scoping of the EIR. During scoping, concerns were expressed regarding levels of traffic on local roads, truck routes on the different project segments, the need for SCE to coordinate with local agencies on the construction schedule, and the repair of any damage to local roads. Several commenters requested that the EIR consider the impact of road closures and potential limited access to residential streets and individual residences and businesses.

Based on these criteria, transportation or traffic impacts would be significant if:

- Construction would require the temporary closure of lanes or roadways that would significantly: reduce the performance of the circulation system; create disruption of traffic flow; increase traffic congestion; restrict the movements of emergency vehicles; disrupt bus transit service; impede pedestrian and bicycle movement; and/or restrict access to residences and businesses.
- Vehicle movements associated with construction worker trips or movement of materials and equipment would result in an unacceptable reduction in level of service on the roadways in the project area.
- Construction activities would conflict with planned transportation projects in the project area.
- An increase in roadway wear and deterioration would occur as a result of being used by heavy trucks or construction equipment.
- Construction activities would result in a temporary but substantial disruption of rail traffic.
- Construction or staging activities would increase the demand for or reduce the supply of parking spaces.
- Helicopter use during construction would pose risks to public safety and create excessive noise and dust.
- Project construction cranes or permanent structures would be at heights so as to create aviation hazards or adversely affect airport or heliport facility use.

NEPA does not have specific significance criteria. However, NEPA regulations contain guidance regarding significance analysis. Specifically, consideration of “significance” involves an analysis of both context and intensity (Title 40 Code of Federal Regulations 1508.27).

D.16.3.3 Impacts and Mitigation Measures

This section presents a discussion of impacts and mitigation measures for the Proposed Project with regard to Transportation and Traffic. The Proposed Project consists of upgrades to existing substations; transmission, subtransmission, and distribution lines; and telecommunication facilities, and the use of staging yards, all of which could result in various impacts on transportation and traffic. Construction and operational impacts are described below for both surface and air transportation.

Applicant Proposed Measures (APMs) are measures that the Applicant includes in its project description and are considered a project commitment. SCE has not identified any APMs to address surface transportation and traffic impacts. With regard to air transportation, SCE has included APM TRANS-1, as listed in Table D.16-10. However, APM TRANS-1 does not provide sufficient information to assure that helicopter impacts would be adequately addressed and, therefore, is superseded by Mitigation Measure T-7a (Prepare and implement a final helicopter use plan), as discussed below for Impact T-7 (Use of helicopters would have potential impacts on public safety and create nuisance conditions).

SCE has stated that construction activities completed within public-street ROWs would require the use of a traffic control service, and any lane closures would be conducted consistent with local ordinances and ministerial city permit conditions. These traffic control measures would be consistent with those published in the California Joint Utility Traffic Control Manual, which conform to the requirements of the California Vehicle Code and the California Manual on Uniform Traffic Control Devices. Where needed, open trench sections would have steel plates placed over them in order to maintain vehicular and pedestrian traffic. Provisions for emergency vehicle access, where necessary, would be incorporated into the construction plan. However, these statements by SCE are not specified as APMs, and so are incorporated in various mitigation measures below.

Impact T-1: Road or travel lane closures for construction would adversely affect traffic flow and congestion, emergency vehicle response, pedestrians/bicyclists routes, and access to adjacent residential and business properties.

The project would require overhead conductors be strung across regional routes I-10, I-215, and SR-68 62 as well as numerous local roads. This could require the temporary closure of a road during the stringing operation, which is a short-duration activity. As well, portions of the relocated 69 kV and 12 kV alignments and the telecommunications circuits would be installed underground, requiring trenching or boring in some locations on local roads, which would temporarily close lanes on affected roads until the lines are installed. Where new poles would be installed adjacent to roads or where subtransmission lines or telecommunication lines would be strung on poles adjacent to roads, temporary traffic controls may be required during installation to ensure worker safety. Encroachment permits are required from agencies having jurisdiction over roads; these specify conditions that would apply to any work in the road ROW, including time of day limitations, lane closure and safety requirements, and repairs, among other specifications.

With the exception of possible emergency work, no road or lane closures are anticipated to occur as a result of operating or maintaining the upgraded system.

Traffic Flow and Congestion. During peak morning and evening commute hours, local through roads and regional highways can experience slow or erratic traffic flow and congestion. Road or lane closures would exacerbate this condition. Where required for stringing of conductor across road, road closures typically are limited by jurisdiction having authority over roads to times of off-peak traffic. The stringing operation is of short duration. Where construction work would occur in or adjacent to a road, such as for trenching or boring, depending on the role of the road in the local street network, local authorities may limit the hours during which the construction can occur, requiring that excavations be temporarily covered and lanes opened during certain critical times.

Emergency Services. Road closures could disrupt the operations of emergency service providers. However, in the event that an emergency service provider vehicle were to approach a roadway temporarily blocked for conductor stringing, by complying with California Joint Utility Traffic Control Manual and required Traffic Control Plans (See Mitigation Measure T-1b below) SCE would be able to accommodate

the emergency vehicle by immediately stopping work to allow the passage of the emergency vehicle with minimal delay. Road or lane closures for underground work would be of longer duration, but would occur in urban settings where traffic control could be altered to give lanes with emergency vehicles priority. Depending on location, if through traffic flow is hindered alternative routes would be available.

Bus Service. Temporary road closures could disrupt regional or local bus service, depending on bus schedules relative to the time of stringing. However, closures for stringing across major highways and roads would be one-time occurrences lasting a few minutes and would occur on days and at times for which traffic is light, as required by agencies with jurisdiction over the roads. Closures of local roadways would occur during the workday, but also would be limited to a few minutes for each closure. Therefore, stringing activities would not substantially disrupt bus service operations.

Pedestrian/Bicyclist Movement. Temporary impacts to pedestrian and/or bicycle movements could occur in urban areas where pedestrians and bicyclists on roadways would be detoured around specific construction areas where work is occurring. Where stringing would occur, these roadways would likely be blocked for only a few minutes. Where lane or road closures would be required for boring or trenching, pedestrians or bicyclists would be directed to alternate routes. They would be able to take short detours around the blocked area. Construction activities would not be expected to impede pedestrian or bicyclist movements, as pedestrians or bicyclists would be directed around the construction. For reasons of safety, sections of the transmission line ROW currently used for such recreational activities such as walking and bicycling (e.g., in Segments 1 and 4) would be unavailable during construction.

Residence/Business Access. Construction work could limit or block access to a property, curtailing or preventing access to the property and any residences or businesses located on the property. During stringing operations, this would be a temporary, short-duration event. However, when trenching or boring would occur at the point of access to the property, the impact would occur over a longer period and would adversely affect the use of a property or income derived from the use of the property.

Mitigation Measures for Impact T-1: Road or travel lane closures for construction would adversely affect traffic flow and congestion, emergency vehicle response, pedestrians/bicyclists routes, and access to adjacent residential and business properties

T-1a Prepare Construction Transportation Plan. Where construction traffic has the potential to significantly affect regional and local roadways by generating additional vehicle trips, SCE shall prepare a Construction Transportation Plan (CTP) describing ~~alternate traffic routes,~~ timing of commutes, methods of reducing crew-related traffic, and other methods for reducing construction-generated additional traffic on regional and local roadways. The CTP also shall require construction workers to park personal vehicles at yards or designated assembly points and carpool to work locations in order to limit the number of construction-related vehicles on the road. At construction sites, vehicles shall be required to park within the project ROW or approved disturbance areas or on access roads to the maximum extent possible. Parking shall not be permitted in areas with dry vegetation that could pose a fire hazard. SCE shall submit the CTP to Caltrans and the affected local jurisdictions for review and approval at least 30 days prior to commencing construction activities.

At least 15 days prior to construction, SCE shall provide a letter or email to CPUC and BLM confirming that the mitigation measure has been executed and shall provide a copy of the final CTP. This communication shall identify persons or agencies contacted, contact information, and the date of contact, and shall summarize discussions and/or agreements reached, if any.

T-1b Prepare Traffic Control Plans. Prior to the start of construction and as part of the required traffic encroachment permits, SCE shall submit Traffic Control Plans (TCPs) to agencies with jurisdiction over the public roads that would be affected by overhead or underground construction. The measures included in the TCPs shall be consistent with the California Joint Utility Traffic Control Manual and the standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, the U.S. Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD), and the Work Area Traffic Control Handbook (WATCH).

Road Safety

TCPs shall identify:

- the locations of all roads or traffic lanes that would need to be temporarily closed due to construction activities, including aerial hauling by helicopter and conductor stringing activities
- the use of flag persons, warning signs, lights, barricades, cones, and similar means to provide safe work areas and to warn, control, protect, and expedite vehicular and pedestrian traffic
- use of guard poles, netting, or similar means to protect moving traffic and structures for any construction or installation work requiring the crossing of a local street, highway, or rail line
- the use of continuous traffic breaks operated by the California Highway Patrol on state highways
- measures to avoid disruptions or delays in access for emergency service vehicles (such as immediately stopping work for emergency vehicle passage, short detours, and alternate routes developed in conjunction with local agencies).

Emergency Services

Police departments, fire departments, ambulance services, and paramedic services shall be notified at least 30 days in advance by SCE of the proposed locations, nature, timing, and duration of any construction activities affecting roads and advised of any access restrictions that could impact their effectiveness. TCPs shall also include measures ensuring work crews are ready at all times to accommodate emergency vehicles, such as having the ability to immediately stop work for emergency vehicle passage and implement short detours and alternate routes developed in conjunction with local agencies. TCPs also shall identify all emergency service agencies, include contact information for those agencies, assign responsibility for notifying service providers, and specify coordination procedures.

Copies of the TCPs shall be provided to the CPUC, BLM, [Caltrans](#), the planning or traffic departments of the affected local jurisdictions, and all affected police departments, fire departments, and ambulance and paramedic services. Documentation of coordination with service providers shall be provided to the CPUC and BLM at least 30 days prior to the start of construction.

T-1c Restrict lane closures. To minimize traffic congestion and delays during construction, SCE shall restrict all necessary lane closures or obstructions on major roadways (as designated by applicable County and City General Plans) associated with overhead construction activities to off-peak traffic periods. Unless absolutely necessary, lane closures must not occur between the peak hours of 6:00 and 9:00 a.m. and 3:30 and 6:30 p.m., or as directed in writing by the affected public agency in the encroachment permit

- T-1d Minimize disruption of bus and transit service.** SCE shall coordinate with local and regional agencies or organizations providing regular bus or transit service in the project area at least 30 days prior to construction to reduce potential interruption of these services. At least 15 days prior to construction, SCE shall provide a letter or email to CPUC and BLM confirming that the mitigation measure has been executed. This communication shall identify persons or agencies contacted, contact information, and the date of contact, and shall summarize discussions and/or agreements reached, if any.
- T-1e Ensure pedestrian and bicycle circulation and safety.** Where construction will result in temporary closures of sidewalks or other pedestrian facilities, SCE shall provide temporary pedestrian access, through detours or safe areas along the construction zone. Where construction activity will result in bike route or bike path closures, appropriate detours shall be established, and detour signs shall be posted. Detours and closures required for safe pedestrian and bicycle access through or around the construction area shall be identified in a circulation plan included in the TCP's required under Mitigation Measure T-1b. All detours and related signage shall be consistent with the standard guidelines outlined in the U.S. Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD).
- T-1f Provide access to property.** When construction activities block access to a property and the property includes a residence or business, SCE shall work with the property owner, tenant, or business owner to provide reasonable alternate access. If construction involves trenching across or in front of the property's point of access and alternative access is not available, SCE shall lay a temporary steel plate trench bridge as needed and upon request in order to ensure access when not actively constructing at the affected location.
- LU-1a Prepare Construction Notification Plan.** (See Section D.11, Land Use and BLM Realty).

Impact T-2: Traffic related to project construction and operation would result in unacceptable levels of service on roadways in the project area.

No more than about 300 personnel are anticipated to be working on the transmission line on any given day, and they would be dispersed at sites scattered along the length of the project. However, full deployment of the construction equipment also required would require a workforce of 767 (SCE, 2013). This level of effort would not be a daily occurrence.

In addition to the peak-hour trip generation by workers, the transmission line component (the greatest traffic generator of the Proposed Project) would include trips during the work day for the movement of cut-and-fill material, watering for dust control, concrete delivery, disposal of old structures, and delivery of new structures.

Because the work would be outdoors, there would be a seasonal variation in starting and quitting times. To minimize the number of vehicles at a site, workers typically park personal vehicles at project construction or staging yards (see Table B-5 Potential Staging Yard Locations) or other designated sites, from where they carpool or are transported to work sites. Most construction workers typically would arrive at designated staging yards prior to 7:00 a.m., before the a.m. peak commute period. During winter, workers would typically leave prior to 4:00 p.m. During summer, construction workers would typically leave after 6:00 p.m. As a result, many construction worker trips would occur outside of the peak commute periods and have no impact on traffic during the morning (a.m.) and evening (p.m.) peak periods. Construction-related truck traffic delivering materials and equipment would be dispersed throughout the project area and throughout the workday. Therefore, the project-related truck traffic

would not result in a substantial impact on traffic conditions in the project area. The construction traffic contributed to local roads would cease with completion of the project.

Transmission line work generally is not sequential along a line, progressing from one end of an alignment to the other; rather, multiple crews would be working at different locations along the alignment performing different tasks at different times. Consequently, transmission line workers would be dispersed throughout the project area using the highways and arterials identified in Tables D.16-1 and D.16-2 and would not occur at the same level from day to day. Given the average daily traffic on these roads without the project, the contribution of the project to the traffic on the regional road network would be minimal.

Both Riverside and San Bernardino Counties identify level of service (LOS) D as the lowest acceptable standard for operation of roadways and intersections within their jurisdictions. Most of the cities in these counties also use LOS D as their standard, but some identify LOS C as their standard. It is expected that no discernible change in the level of service would be observed on roads or at intersections in the project area. Given existing levels of traffic, and that project-related trip generation would be spread throughout the 48-mile project corridor and would cease with the completion of construction, the overall impact of the Proposed Project construction traffic on level of service would be minimal. To ensure this outcome, a construction transportation plan would be required, as specified in Mitigation Measure T-1a.

Once constructed, operation of the proposed transmission line and associated facilities would have negligible impacts on the ground transportation system (roadways and railroads) under normal circumstances. The inspection and maintenance activities would generate a very small volume of vehicular traffic. If a major repair were required at a particular location, the temporary transportation impacts would be similar to the construction impacts addressed above.

Mitigation Measure for Impact T-2 Traffic related to project construction and operation would result in unacceptable levels of service on roadways in the project area.

T-1a Prepare Construction Transportation Plan.

Impact T-3: Construction would conflict with planned transportation projects

The proposed transmission line and other system upgrades would cross numerous roadways/transportation corridors and these construction activities could potentially conflict with improvement projects along one or more of these routes. The public agencies that have jurisdiction over the affected roadways have been notified of the project through the Notice of Preparation/Notice of Intent, and encroachment permits or other such agreements must be obtained for each location where the project would interface with a roadway or other transportation facility. Complying with local permits and agreements would ensure appropriate coordination between SCE and the affected agencies so that conflicts would be avoided or minimized.

Mitigation Measure for Impact T-3: Construction would conflict with planned transportation projects.

T-3a Avoid conflicts with planned transportation improvements. Prior to final project design, SCE shall review project plans with Caltrans and local traffic departments or public works departments of the counties and the individual cities through which the proposed transmission route would pass. The review will be conducted to identify planned transportation projects potentially affected, to ensure that Project structures are placed to avoid conflict with any planned transportation projects, and to inform the jurisdictions of the timing and loca-

tion of any trenching or boring that may affect road surfaces and the flow of traffic. If there are conflicts they shall be addressed through mutual agreement of SCE and the jurisdiction.

At least 15 days prior to construction, SCE shall provide a letter or email to CPUC and BLM confirming that the mitigation measure has been executed. This communication shall identify persons or agencies contacted, contact information, and the date of contact, and shall summarize discussions and/or agreements reached.

Impact T-4: Construction vehicles and equipment would potentially damage roads in the project area

Under applicable laws and ordinances, loads are required to not exceed legal weight limits applicable to roads and bridges in the project area. A Caltrans special permit is required for the movement of vehicles/loads exceeding statutory weight and dimension limits. Moving permits from affected local agencies for loads exceeding legal weight and size limits on local roads will also be required. However, the movement of heavy trucks and equipment on roadways providing access to project sites potentially could result in damage to road surfaces, shoulders, curbs, signs, and light standards. Damage and deterioration attributed to the project would need to be repaired.

Mitigation Measure for Impact T-4: Construction vehicles and equipment would potentially damage roads in the project area

T-4a **Repair roadways damaged by construction activities.** If roadways, sidewalks, medians, curbs, shoulders, or other such features are damaged by the project's construction activities, as determined by the affected public agency, such damage shall be repaired and streets restored to their pre-project condition by SCE. Prior to construction, SCE shall confer with agencies having jurisdiction over the roads anticipated to be used by delivery vehicles and equipment. Unless an alternative method for determining roadway condition is required by a given jurisdiction, At least 30 days prior to construction, SCE shall photograph or video record all construction route public roads within 500 feet in each direction of project access points (i.e., locations where vehicles leave public roads to reach project sites) and roadways where the road surface will be damaged by project-related trenching or digging, and shall provide the respective local jurisdictions, CPUC, BLM, and Caltrans (if applicable) with a copy of these images.

At least 15 days prior to construction, SCE shall provide a letter or email to CPUC and BLM confirming that the mitigation measure has been executed. This communication shall identify persons or agencies contacted, contact information, and the date of contact, and shall summarize discussions and/or agreements reached.

At the end of major construction, SCE shall coordinate with each affected jurisdiction to confirm what repairs would be required. Any damage shall be repaired to the pre-construction condition within 60 days from the end of all construction, or on a schedule mutually agreed to by SCE and the jurisdiction. SCE shall provide CPUC and BLM confirming documentation when the coordination has been completed and when the repairs have been completed.

Impact T-5: Construction activities would cause a temporary disruption to rail traffic or operations

The Proposed Project would cross the Union Pacific (UP) Railroad and the Burlington Northern Santa Fe (BNSF) Railway in Segment 1 and the Union Pacific Railroad in Segment 4. Transmission line stringing activities over the railroads could temporarily affect rail operations. This adverse effect would be reduced through implementation of Mitigation Measure T-5a.

Mitigation Measures for Impact T-5: Construction activities would cause a temporary disruption to rail traffic or operations

T-5a Obtain required permits or approvals for crossing or working in railroad rights-of-way. SCE shall obtain permits/approvals from affected railway operators (Union Pacific Railroad and Burlington Northern Santa Fe Railway) to ensure that project construction activities in the rail ROW comply with each company's safety requirements and to avoid disruption to rail traffic. Copies of required permits or approvals shall be submitted to the CPUC and BLM ~~at least 60 days~~ prior to construction in or across rail ROWs.

Impact T-6: Construction would result in the short-term elimination of parking spaces

The Proposed Project could result in the short-term elimination of existing parking spaces associated with the Desert Hills Premium Outlets near I-10 in Segment 5 and, depending on construction activity, along roadways throughout the project area. Except for occasional restrictions on street parking during pole installations, during trenching or boring sites, or during conductor stringing across roadways, no other short-term elimination of parking is anticipated. This adverse effect would be reduced through implementation of Mitigation Measure T-6a.

Mitigation Measures for Impact T-6: Construction would result in the short-term elimination of parking spaces.

T-6a Notify public of short-term elimination of public parking spaces. As required in Mitigation Measure LU-1a, prior to construction activity on major roadways, using media such as local newspapers and on-site postings, SCE shall notify the public of the potential for public parking spaces to be temporarily eliminated and identify where temporary parking spaces would be located. This requirement shall apply when more than five parking spaces are affected. The elimination of parking and location of alternative parking must be in conformance with the requirements of agencies responsible for parking management.

Impact T-7: Use of helicopters would have potential impacts on public safety and create nuisance conditions.

SCE has identified that some helicopter-based deconstruction of existing towers, poles, and associated equipment and conductors may occur but that helicopter-based transmission structure construction is not anticipated to be required. However, SCE anticipates that helicopter delivery of equipment and materials from construction staging yards to transmission structure sites may occur and that helicopters may be used for hardware installation and during conductor and optical ground wire (OPGW) stringing operations. SCE also has noted that, depending on final engineering, helicopter-based construction may be required if (1) a site is inaccessible by a crane and/or (2) the contractor selected to undertake the project selects helicopter use as one of the means to be used to execute the work. Therefore, to be conservative, this EIR considers that helicopters may be used in all aspects of the project. A preliminary helicopter use plan was submitted by SCE (see Attachment D.16-1 at the end of this section). Mitigation Measure T-7a (Prepare and implement a final helicopter use plan) supersedes SCE's APM TRANS-1.

During operations, helicopters would be used for periodic line inspections and for insulator cleaning.

Mitigation Measures for Impact T-7: Use of helicopters would have potential impacts on public safety and wildlife, and create disturbance.

T-7a Prepare and implement a final helicopter use plan. SCE and its contractor shall prepare and obtain approval of a Final Helicopter Use Plan prior to using helicopters to transport personnel, materials, or equipment for the deconstruction of existing project facilities or construction of new or replacement project facilities. The Final Helicopter Use Plan shall draw upon protocols and methods used on previous transmission line projects and shall be submitted to CPUC and BLM for approval.

The Federal Aviation Agency (FAA) has jurisdiction over U.S. airspace, aircraft, aircraft operations, airports, and pilots. To the extent that they do not conflict with any FAA requirements, the following shall apply to helicopter use and be incorporated in the Final Helicopter Use Plan.

- All aircraft and pilots shall be in full compliance with applicable FAA requirements and standards.
- On the prior day, helicopter flight information shall be provided to CPUC/BLM monitors regarding the specific sites to be used for helicopter picks and the destination of the materials or assemblages being lifted out.
- Daily flight notifications shall be issued by e-mail prior to commencement of any project flight activity. Information provided in the e-mail shall include pilot name, contact number, aircraft type, aircraft registration number, aircraft color, work/flight area, beginning time, estimated completion time, and scope of work. This information will be provided to CPUC/BLM monitors as well.
- The specific facilities, towers, poles, and spans requiring deconstruction or construction using helicopters shall be identified.
- Temporary staging of materials and assembly of tower sections outside of approved yards shall not occur without prior approval of CPUC or BLM, as appropriate.
- The yards to and from which helicopters would fly (fly yards) shall be identified and shall be of sufficient size to ensure safe operations, given the other activities occurring at the yards and the vicinity.
- Fly yards shall be sufficiently far from occupied residences to not create an unacceptable level of noise or dust.
- The means used for dust and noise control and for safe refueling shall be specified for each fly yard.
- Flight paths that minimize flights near schools, hospitals, nursing homes, and other sensitive group receptors shall be identified and followed.
- Except in an emergency, helicopters shall land or hover near the ground only in areas previously approved for landing, and all dust control and biological and cultural resource protection requirements shall apply.
- External loads will be secured by appropriate rigging, including boxing, netting, choking, and cabling, or other suitable means. Only qualified riggers shall prepare and attach external loads to helicopters, and rigging shall be appropriate to the nature of the load, including the use of devices as necessary to prevent materials being lost in flight. Where

appropriate to reduce load in-flight spinning and movement, drag chutes will be attached to loads. The need for drag chutes will be determined by the pilot and rigging personnel, where appropriate. At locations where rigging is to occur, a sufficient supply of appropriate rigging and containment materials in good repair shall be on hand at all times.

- All aircraft are to be configured with weight sensors such that, when preparing to haul external loads, the pilot is able to determine the weight of the load being lifted.
- Yards or landing zones shall have a designated qualified individual managing the movement of aircraft in and out of the yard or landing zone when flight activity is high.
- Appropriate protocols for communication among pilots and between pilots and the ground shall be developed and implemented.
- A GPS-based data system shall be installed in each aircraft
 - The system shall identify for the pilot all project-approved project flight paths and those areas where overflights are restricted (such as seasonally restricted bird nesting areas and sensitive residential or institutional areas), and shall be updated as often as any flight restrictions are implemented or lifted.
 - The system shall automatically record and preserve flight data sufficient to identify the aircraft's flight path, including altitude above ground. The system shall be capable of providing the information required with regard to flight path and aircraft identifier, and provide a location "ping" no less frequently than once every 3 seconds. These data shall be collected daily and maintained by SCE or its contractor for a period of no less than six months and made available to CPUC or BLM upon request.

The Helicopter Use Plan shall be submitted to CPUC and BLM for review and approval at least 60 days prior to the use of helicopters on the project. Once the Helicopter Use Plan is made final, a copy shall be provided as a courtesy to each jurisdiction through which the Project passes.

Impact T-8: Operations would affect aviation safety and activities associated with public airports

The presence of new towers or poles within 20,000 feet of San Bernardino International Airport and Banning Municipal Airport could potentially affect aviation activities because some towers or poles would extend through an imaginary surface extending outward and upward from the airport runways at a ratio of 100 to 1. As well, any towers or poles greater than 200 feet above ground level and conductor spans in some locations could pose aviation hazards. Adherence to FAA guidelines would be required with regard to both the height of facilities and any safety devices to be installed on facilities. Pursuant to FAA guidelines, SCE is 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. FAA will identify what structures pose hazards and will specify any safety devices that may be required and whether any tower or pole heights would be restricted. Implementation of Mitigation Measure T-8a would reduce the severity of this adverse effect.

T-8a Obtain FAA review and approval of all structures and spans posing potential aircraft safety hazards. SCE shall submit the required forms and information to FAA for its review and approval of transmission structures and conductor spans that may require installation of safety devices or other restrictions. Copies of FAA's review and approval shall be provided to CPUC and BLM at least 60 days prior to erection of structures or installation of conductors that would be in violation of FAA standards and requirements. These structures and spans

shall be identified to CPUC and BLM, and the planned installation of required lighting and marker balls described.

D.16.3.4 Impacts of Connected Actions

Because of their remote locations, large solar projects would not result in all of the impacts that would occur with development of a high-voltage transmission project in a mixed urban, suburban, and rural environment. Those impacts identified for the Proposed Project that are not expected to occur for the connected action projects include: Impacts T-5 (Construction activities would cause a temporary disruption to rail traffic or operations), T-6 (Construction would result in the short-term elimination of parking spaces), T-7 (Use of helicopters would have potential impacts on public safety and create nuisance conditions), and T-8 (Operations would affect aviation safety and activities associated with public airports). The 4 impacts expected to occur due to construction and operation of the connected actions for transportation and traffic are discussed below without differentiating the geographic areas, since the impact descriptions would be similar for each area.

Impact T-1: Road or travel lane closures for construction would adversely affect traffic flow and congestion, emergency vehicle response, pedestrians/bicyclists routes, and access to adjacent residential and business properties

The defined solar projects would be located in sparsely populated or remote areas. None of the identified connected solar projects are expected to require road closures except possibly briefly, while stringing gen-tie line conductor across roads, which would create a temporary delay if traffic were present. This would not affect emergency vehicle response, as operations could cease until emergency vehicles pass.

Use of pedestrian/bicycle routes, if any, and access to residential and business properties is not anticipated to be affected due to the low density of the development areas. However, construction traffic has the potential to affect regional and local roadways by generating additional vehicle trips. This could result in backups at interchanges and intersections through which traffic would flow to reach work sites. Typical measures to address this impact include preparation of construction transportation plans (which may include carpooling requirements) and traffic control plans (which would manage traffic in and out of sites and provide for alternate access if a property is blocked by project activities).

Impact T-2: Traffic related to project construction and operation would result in unacceptable levels of service on roadways in the project area

Most of the identified solar projects would be in areas with little local traffic and all would be in reasonable proximity to I-10, a major interstate freeway. While construction of the projects would increase the level of traffic on I-10 at peak activity levels, this would not be a significant increase as compared to existing road capacity and traffic levels.

Impact T-3: Construction would conflict with planned transportation projects

Because of their remote locations, the connected solar projects are unlikely to conflict with planned transportation projects. However, prior to construction, project proponents would coordinate traffic management with agencies having jurisdiction over local roads. This would provide an opportunity for the parties to identify any planned transportation projects and discern any potential impacts of the solar project on planned transportation projects.

Impact T-4: Construction vehicles and equipment would potentially damage roads in the project area

Vehicle and equipment required for construction of solar projects can result in damage to roads and shoulders in the vicinity of the projects. Generally, this is the result of heavy loads, rather than light vehicle traffic. Typical measures to address this impact include implementing a traffic control plan that specifies routes to be used for equipment and material deliveries and an agreement to document road conditions at the beginning and end of construction, and to repair the roads or contribute a fair share of the repair cost.

D.16.3.5 CEQA Significance Determination for Proposed Project and Connected Actions

Impact T-1: Road or travel lane closures for construction would adversely affect traffic flow and congestion, emergency vehicle response, pedestrians/bicyclists routes, and access to adjacent residential and business properties (Class II)

The Proposed Project would require the temporary closure of roads when conductor stringing operations would cross over public roads. As well, installation of lower voltage lines and telecommunications circuits would require trenching or boring at some locations, resulting in localized lane or road closures. These closures could adversely affect the flow of traffic and the level of congestion. Emergency service vehicles could be hindered in reaching their destinations and regional and local bus service could be disrupted. Impacts to pedestrian and/or bicycle movements could occur and depending on the location of any needed trenching, access to adjacent properties could be adversely affected. These would be significant impacts if not addressed. Mitigation Measures T-1a (Prepare Construction Transportation Plan), T-1b (Prepare Traffic Control Plans), T-1c (Restrict lane closures), T-1d (Minimize disruption of bus and transit service), T-1e (Ensure pedestrian and bicycle circulation and safety), T-1f (Provide access to property), and L-1a (Prepare Construction Notification Plan) include requirements that when implemented, would reduce this impact to a less than significant level (Class II).

Although connected solar projects are in rural or remote locations, their construction could require brief road or land closures during certain construction activities. Depending on the site location, project construction could briefly affect access to adjacent properties. Implementation of typical mitigation, such as a construction transportation plan, would ensure that this impact is less than significant (Class II).

Impact T-2: Traffic related to project construction and operation would result in unacceptable levels of service on roadways in the project area (Class II)

For the Proposed Project, traffic generated by construction worker commute trips, equipment deliveries, and the hauling of construction materials and debris would increase traffic volumes on the local and regional road network. The greatest number of vehicle movements would be associated with the project workforce's use of vehicles to reach work sites. Mitigation Measure T-1a (Prepare construction transportation plan) would reduce the number of personal vehicle miles travelled by requiring that workers assemble at designated locations in order to carpool or be transported to work sites. Implementation of this measure would reduce this impact to a less than significant level (Class II).

With regard to connected actions, the location of solar projects in areas with generally light traffic is not expected to result in unacceptable levels of service on roadways in the vicinity of the projects. However, implementation of a construction transportation plan, including adoption of carpooling and time-of-day arrival and departure of workers, would ensure that any level of service impacts are addressed. This would result in a less than significant impact with mitigation (Class II).

Impact T-3: Construction would conflict with planned transportation projects (Class II)

The Proposed Project's transmission lines would cross numerous roadways/transportation corridors and construction activities could potentially conflict with improvement projects along one or more of these transportation facilities. Mitigation Measure T-3a (Avoid conflicts with planned transportation improvements) requires that potential conflicts with planned transportation improvement be avoided through coordination with the appropriate jurisdictions and agencies. Implementation of these measures would ensure that this impact is less than significant (Class II).

While conflicts between connected solar projects and planned transportation projects are unlikely, implementation of a requirement that project proponents coordinate with regional transportation management agencies would ensure that this impact is less than significant (Class II).

Impact T-4: Construction vehicles and equipment would potentially damage roads in the project area (Class II)

Under the Proposed Project, the use of roadways by heavy trucks and other equipment during project construction activities could potentially cause physical damage and/or deterioration of the road surface and other road features. Trenching or boring in public road ROWs would damage the roadbed, requiring appropriate repair. The impacts to roads would be potentially significant, but reduced to a less than significant level with the implementation of Mitigation Measure T-4a (Repair roadways damaged by construction activities) (Class II).

As with the Proposed Project, heavy trucks and equipment can cause damage to roads leading to solar project sites. Implementation of a measure to require documentation of road conditions and appropriate repair or payment for damage would ensure that this impact is less than significant (Class II).

Impact T-5: Construction activities would cause a temporary disruption to rail traffic or operations (Class II)

The Proposed Project would cross the Union Pacific Railroad and the Burlington Northern Santa Fe Railway rail lines. Transmission line stringing activities over the railroads could temporarily affect rail operations., SCE would be required to comply with railroad requirements in order to work in the rail ROW. This would reduce or eliminate potential disruption to rail service. With implementation of Mitigation Measure T-5a (Obtain required permits or approvals for crossing or working in railroad rights-of-way) this impact would be less than significant (Class II).

This impact is not expected to occur for connected solar projects.

Impact T-6: Construction would result in the short-term elimination of parking spaces (Class II)

The Proposed Project could result in the short-term elimination of existing parking spaces along roadways and in shopping centers during project construction, including stringing and work in roadways. This impact would be reduced to a less than significant level by implementation of Mitigation Measure T-6a (Notify public of short-term elimination of public parking spaces) (Class II).

This impact is not expected to occur for connected solar projects.

Impact T-7: Use of helicopters would have potential impacts on public safety and create nuisance conditions (Class II)

Use of helicopters in project construction would require flights in and out of various yards and the carrying of passengers and external loads between yards and work sites. This would create potential safety and nuisance concerns. The loss of a suspended load or excessive noise and dust would be significant impacts. The Federal Aviation Agency has jurisdiction over helicopters and pilots. However, with implementation of Mitigation Measure T-7a (Prepare and implement a final helicopter use plan), SCE would be required to prepare and implement a plan that ensures safe operations, including the handling of external loads and specifying locations where helicopters would be allowed to fly and land. Dust and noise controls would be imposed to reduce nuisance effects, and routes would be specified that avoid certain sensitive receptors. This would ensure that the impacts of helicopter use are less than significant (Class II).

This impact is not expected to occur for connected solar projects.

Impact T-8: Operations would affect aviation safety and activities associated with public airports (Class II)

The presence of new structures or tall construction equipment could potentially affect aviation activities at local airports. This would be a significant impact. However, compliance with FAA requirements would ensure that this impact would be less than significant. Pursuant to FAA guidelines, SCE would be required to submit facility location and height information to FAA for review and approval. This would be within specific areas around airports and locations where facilities exceed 200 feet in height above ground level. Adherence to FAA requirements and implementation of Mitigation Measure T-8a (Obtain FAA review and approval of all structures and spans posing potential aircraft safety hazards) would ensure that construction and operation impacts to aviation activities would be less than significant (Class II).

This impact is not expected to occur for connected solar projects.

D.16.4 Environmental Impacts of Project Alternatives

Three alternatives are considered in this section; all of these alternatives would be located within the existing WOD ROW. The No Project Alternative is evaluated in Section D.16.5. Alternatives are described in detail in Appendix 5 (Alternatives Screening Report) and are summarized in Section C.

The transportation and traffic setting within the ROW is described by segment in Section D.16.1.2 above; the description of the environmental setting would apply equally to the alternatives.

D.16.4.1 Tower Relocation Alternative

The Tower Relocation Alternative would locate certain transmission structures in Segments 4, 5, and 6 farther from existing homes than would be the case under the Proposed Project.

Eight impacts related to transportation and traffic were identified for the Proposed Project. These impacts also would apply to the Tower Relocation Alternative. With the exception of the relocated transmission towers described above and in Appendix 5, this alternative otherwise would be the same as the Proposed Project. The full text of all mitigation measures referenced in this section is presented in Section D.16.3.3, except where otherwise noted.

Impact T-1: Road or travel lane closures for construction would adversely affect traffic flow and congestion, emergency vehicle response, pedestrians/bicyclists routes, and access to adjacent residential and business properties

The tower relocations under this alternative would occur within the existing ROW and would not directly affect any roadways. No road or travel lane closures would be required by the relocation. Impacts from relocating selected towers approximately 50 feet north of their proposed positions would be the same as impacts from the Proposed Project at these locations. Impacts of relocating towers, including all project elements as proposed elsewhere not modified by the alternative, would be addressed by implementation of Mitigation Measures T-1a (Prepare Construction Transportation Plan), T-1b (Prepare Traffic Control Plans), T-1c (Restrict lane closures), T-1d (Minimize disruption of bus and transit service), T-1e (Ensure pedestrian and bicycle circulation and safety), T-1f (Provide access to property), and LU-1a (Prepare Construction Notification Plan).

Impact T-2: Traffic related to project construction and operation would result in unacceptable levels of service on roadways in the project area

The repositioning of selected towers would not result in additional project-related traffic. The same number of personnel and the same types of equipment would be required for site preparation and tower construction at the relocation sites as would be required at the originally proposed tower sites.

Impact T-3: Construction would conflict with planned transportation projects

The relocated towers are not on public roads and would not conflict with planned transportation projects. Avoidance of potential conflicts would be accomplished with implementation of Mitigation Measure T-3a (Avoid conflicts with planned transportation improvements), which would require coordination with transportation authorities in the project vicinity to ensure conflicts do not occur.

Impact T-4: Construction vehicles and equipment would potentially damage roads in the project area

The use of roads in the project area would be the same under both the Proposed Project and the Tower Relocation Alternative. Vehicles, equipment, and materials would reach the relocation sites using the same roadways as would be used to reach the tower sites originally proposed; therefore, any potential damage to roads would be the same under both the Proposed Project and the alternative. Mitigation Measure T-4a (Repair roadways damaged by construction activities) would apply under both the Proposed Project and the alternative, ensuring that road damage from construction vehicles is repaired.

Impact T-5: Construction activities would cause a temporary disruption to rail traffic or operations

There are no rail lines in the vicinity of the relocated towers. Impacts on rail traffic or operations would be the same under the Proposed Project and the alternative, and Mitigation Measure T-5a (Obtain required permits or approvals for crossing or working in railroad rights-of-way) would apply.

Impact T-6: Construction would result in the short-term elimination of parking spaces

There are no parking spaces that would be affected by the tower relocations. Impacts on parking elsewhere related to project construction would be the same as for the Proposed Project, and Mitigation Measure T-6a (Notify public of short-term elimination of public parking spaces) would be implemented.

Impact T-7: Use of helicopters would have potential impacts on public safety and create nuisance conditions

Construction methods for the relocated towers have not been specified. Because the relocations are near the original proposed replacement tower sites, it is assumed that the construction methods would be similar. If helicopters are used, the same requirements would apply to the Proposed Project and the Tower Relocation Alternative. SCE would be required to implement Mitigation Measure T-7a (Prepare and implement a final helicopter use plan), which would be subject to CPUC and BLM approval and would specify flight and cargo carrying requirements that would protect public safety and minimize nuisances.

Impact T-8: Operations would affect aviation safety and activities associated with public airports

The towers that would be relocated under this alternative are not near public airports. However, towers elsewhere in the project ROW would be near an airport. The impact of the Proposed Project and the alternative would be the same with regard to aviation safety. Towers and the conductor spans can pose hazards to aircraft. Implementation of Mitigation Measure T-8a (Obtain FAA review and approval of all structures and spans posing potential aircraft safety hazards) would address this by requiring SCE to obtain FAA approval of tower locations. FAA would determine what restrictions may apply and whether specific towers and spans would require safety devices.

CEQA Significance Determination for Tower Relocation Alternative

The CEQA significance determination for each transportation and traffic impact in this alternative is presented below.

Impact T-1: Road or travel lane closures for construction would adversely affect traffic flow and congestion, emergency vehicle response, pedestrians/bicyclists routes, and access to adjacent residential and business properties (Class II)

While relocated towers would not require the temporary closure of roads during conductor stringing operations, the project overall would cross over public roads, which would require temporary closures. The alternative and the Proposed Project are the same in this regard. These closures and closures for work in road ROWs could adversely affect the flow of traffic and the level of congestion. Emergency service vehicles could be hindered in reaching their destinations regional and local bus service could be disrupted. Impacts to pedestrian and/or bicycle movements could occur and depending on the location of any needed trenching, access to adjacent properties could be adversely affected. These would be significant impacts if not addressed. Mitigation Measures T-1a (Prepare Construction Transportation Plan), T-1b (Prepare Traffic Control Plans), T-1c (Restrict lane closures), T-1d (Minimize disruption of bus and transit service), T-1e (Ensure pedestrian and bicycle circulation and safety), T-1f (Provide access to property), and L-1a (Prepare construction notification plan) include requirements that when implemented, would reduce this impact to a less than significant level (Class II).

Impact T-2: Traffic related to project construction and operation would result in unacceptable levels of service on roadways in the project area (Class II)

Implementation of the Tower Relocation Alternative would not create additional traffic. Under the alternative and the Proposed Project, traffic generated by construction worker commute trips, equipment deliveries, and the hauling of construction materials and debris would increase traffic volumes on the local and regional road network. Mitigation Measure T-1a (Prepare construction transportation plan) would reduce the number of personal vehicle miles travelled by requiring that workers assemble at des-

ignated locations in order to carpool or be transported to work sites. Implementation of this measure would reduce this impact to a less than significant level (Class II).

Impact T-3: Construction would conflict with planned transportation projects (Class II)

Because the relocated towers would be in the existing ROW and not near roads, conflicts with planned transportation projects would not occur. However, under this alternative the balance of the project would be constructed as proposed. The proposed transmission lines would cross numerous roadways/ transportation corridors and construction activities could potentially conflict with improvement projects. Mitigation Measure T-3a (Avoid conflicts with planned transportation improvements) requires that potential conflicts with planned transportation improvement be avoided through coordination with the appropriate jurisdictions and agencies. Implementation of these measures would ensure that this impact is less than significant (Class II).

Impact T-4: Construction vehicles and equipment would potentially damage roads in the project area (Class II)

Relocating selected towers would not require additional equipment and would not establish access routes and access points that differ from the Proposed Project. Overall, the use of roadways by heavy trucks and other equipment during project construction activities could potentially cause physical damage and/or deterioration of the road surface and other road features. Trenching or boring in public road ROWs would damage the roadbed, requiring appropriate repair. The impacts to roads would be reduced to a less than significant level with the implementation of Mitigation Measure T-4a (Repair roadways damaged by construction activities) (Class II).

Impact T-5: Construction activities would cause a temporary disruption to rail traffic or operations (Class II)

There are no rail lines in the vicinity of the relocated towers and no rail lines would be affected. Overall, the Proposed Project would cross two rail lines. Transmission line stringing activities over the railroads could temporarily affect rail operations. SCE would be required to comply with railroad requirements in order to work in the rail ROW. This would reduce or eliminate potential disruption to rail service. With implementation of Mitigation Measure T-5a (Obtain required permits or approvals for crossing or working in railroad rights-of-way) this impact would be less than significant (Class II).

Impact T-6: Construction would result in the short-term elimination of parking spaces (Class II)

No parking spaces are located near the tower relocation sites. However, the Proposed Project overall could result in the short-term elimination of existing parking spaces along roadways and in shopping centers during project construction, including stringing and work in roadways. This impact would be reduced to a less than significant level by implementation of Mitigation Measure T-6a (Notify public of short-term elimination of public parking spaces) (Class II).

Impact T-7: Use of helicopters would have potential impacts on public safety and create nuisance conditions (Class II)

Construction of the relocated towers is expected to use similar techniques as would be used for the towers at their proposed locations. This may include use of helicopters, but this would not be greater than would be the case under the Proposed Project. Use of helicopters in project construction would require flights in and out of various yards and the carrying of passengers and external loads between yards and work sites. The loss of a suspended load or excessive noise and dust would be significant

impacts. The Federal Aviation Agency has jurisdiction over helicopters and pilots. However, with implementation of Mitigation Measure T-7a (Prepare and implement a final helicopter use plan), SCE would be required to prepare and implement a plan that ensures safe operations, including the handling of external loads and specifying locations where helicopters would be allowed to fly and land. Dust and noise controls would be imposed to reduce nuisance effects, and routes would be specified that avoid certain sensitive receptors. This would ensure that the impacts of helicopter use are less than significant (Class II).

Impact T-8: Operations would affect aviation safety and activities associated with public airports (Class II)

The presence of new structures or tall construction equipment could potentially affect aviation activities at local airports. None of the relocated towers would be near airports. However, towers at other locations would be near airports. SCE would be required to submit facility location and height information to FAA for review and approval. Adherence to FAA requirements and implementation of Mitigation Measure T-8a (Obtain FAA review and approval of all structures and spans posing potential aircraft safety hazards) would ensure that construction and operation impacts to aviation activities would be less than significant (Class II).

D.16.4.2 Iowa Street 66 kV Underground Alternative

The Iowa Street 66 kV Underground Alternative would place a 1,600-foot segment of subtransmission line underground, rather than overhead.

Eight impacts were identified under the Proposed Project for transportation and traffic. These impacts also would apply to the Iowa Street 66 kV Underground Alternative, which overall would be the same as the Proposed Project, with the exception of the underground portion of the subtransmission line that is described above and in Appendix 5. The full text of all mitigation measures referenced in this section is presented in Section D.9.16.3, except where otherwise noted.

Impact T-1: Road or travel lane closures for construction would adversely affect traffic flow and congestion, emergency vehicle response, pedestrians/bicyclists routes, and access to adjacent residential and business properties

Undergrounding a segment of the 66 kV line in Iowa Street would increase the total amount of roadway affected by road or lane closures, as compared to the Proposed Project. The work would be in Redlands, in an area having a grid road pattern with roads 0.25 miles apart. In the work area, Iowa Street is both 2- and 3-lanes wide. Barton Road is 4 lanes with a median and bike path. Where lane closures are required, appropriate traffic management and controls would be needed. These controls would be defined in Mitigation Measures T-1a (Prepare Construction Transportation Plan), T-1b (Prepare Traffic Control Plans), T-1c (Restrict lane closures), T-1d (Minimize disruption of bus and transit service), T-1e (Ensure pedestrian and bicycle circulation and safety), T-1f (Provide access to property), and L-1a (Prepare construction notification plan), which would be required.

Impact T-2: Traffic related to project construction and operation would result in unacceptable levels of service on roadways in the project area

Construction in Iowa Street is expected to temporarily close one lane. Construction across Orange Avenue and Barton Road would require lane closures and diversions. Similar lane closures would be required likely during installation of poles and conductor under the Proposed Project, but would be shorter in duration. Lane closures under this alternative could adversely affect traffic flow on Iowa

Street, Orange Avenue, and Barton Road, leading to delays during the period when lanes are closed for trenching and conduit installation. The impact would end with completion of construction. To reduce the number of personal vehicle miles travelled by workers, Mitigation Measure T-1a (Prepare construction transportation plan) would be required. The impact on levels of service in the project area would be similar for both the Proposed Project and the alternative (which includes all other components as proposed for the entire project except the overhead segment on Iowa Street).

Impact T-3: Construction would conflict with planned transportation projects

No known transportation projects are planned on Iowa Street, Orange Avenue, or Barton Road in the vicinity of the underground segment. This could change in the future if transportation projects are proposed that would overlap with the transmission line work. Mitigation Measure T-3a (Avoid conflicts with planned transportation improvements) requires that potential conflicts with planned transportation improvements be avoided through coordination with the appropriate jurisdictions and agencies

Impact T-4: Construction vehicles and equipment would potentially damage roads in the project area

Trenching to install the underground segment would damage the road surface. SCE would be required to repair roads to their previous condition under Mitigation Measure T-4a (Repair roadways damaged by construction activities).

Impact T-5: Construction activities would cause a temporary disruption to rail traffic or operations

There are no rail lines in the vicinity of the underground segment in this alternative. Impacts on rail traffic and operations would be the same under the alternative and the Proposed Project. Mitigation Measure T-5a (Obtain required permits or approvals for crossing or working in railroad rights-of-way) would be required for the Proposed Project and the alternative, which would be identical to the project in all other respects except for the underground segment in Iowa Street.

Impact T-6: Construction would result in the short-term elimination of parking spaces

Little street parking was observed on Iowa Street in the area of the underground alternative. Commercial establishments along the road have parking lots; the few residences fronting on the street have driveways that could accommodate parking. Closure of one lane of Iowa Street along the curb would temporarily eliminate potential parking along the street, but sufficient alternative parking is located nearby. Because other areas through which the project would pass could experience short-term elimination of parking, Mitigation Measure T-6a (Notify public of short-term elimination of public parking spaces) would be required. The impact on parking would be the same for the alternative and for the Proposed Project.

Impact T-7: Use of helicopters would have potential impacts on public safety and create nuisance conditions

No use of helicopters along the Iowa Street portion of the project is anticipated. Because helicopters would be used elsewhere on the project, Mitigation Measure T-7a (Prepare and implement a final helicopter use plan) would be required of SCE. This would address public safety and nuisance conditions for the Proposed Project and those portions of the alternative that are not on Iowa Street.

Impact T-8: Operations would affect aviation safety and activities associated with public airports

The Iowa Street portion of the project is not near a public airport, and undergrounding a segment of line would not affect aviation safety. Because portions of the Proposed Project and other parts of the alter-

native not on Iowa Street would be near an airport in other areas, Mitigation Measure T-7a (Prepare and implement a final helicopter use plan) would be required of SCE. This would address public safety and nuisance conditions for the Proposed Project and those portions of the alternative that are not on Iowa Street; Mitigation Measure T-8a (Obtain FAA review and approval of all structures and spans posing potential aircraft safety hazards) would be required.

CEQA Significance Determination for Iowa Street 66 kV Underground Alternative

The CEQA significance determination for each transportation and traffic impact in this alternative is presented below.

Impact T-1: Road or travel lane closures for construction would adversely affect traffic flow and congestion, emergency vehicle response, pedestrians/bicyclists routes, and access to adjacent residential and business properties (Class II)

The 66 kV undergrounding in Iowa Street (and across Orange Avenue and Barton Road) would require the temporary closure of lanes during trenching and installation of the conduits. The closures could adversely affect the flow of traffic and the level of congestion. Emergency service vehicles could be hindered in reaching their destinations and regional and local bus service could be disrupted. Impacts to pedestrian and/or bicycle movements could occur and depending on the location of trenching, access to adjacent properties could be adversely affected. Mitigation Measures T-1a (Prepare Construction Transportation Plan), T-1b (Prepare Traffic Control Plans), T-1c (Restrict lane closures), T-1d (Minimize disruption of bus and transit service), T-1e (Ensure pedestrian and bicycle circulation and safety), T-1g (Provide access to property), and L-1a (Prepare construction notification plan) include requirements that when implemented, would reduce this impact to a less than significant level (Class II), similar to the Proposed Project.

Impact T-2: Traffic related to project construction and operation would result in unacceptable levels of service on roadways in the project area (Class II)

Traffic generated by construction worker commute trips, equipment deliveries, and the hauling of construction materials and debris would increase traffic volumes on the local and regional road network. This would be true for both the Proposed Project and the underground alternative, which would be the same as the Proposed Project except along Iowa Street. The greatest number of vehicle movements would be associated with the project workforce's use of vehicles to reach work sites. Mitigation Measure T-1a (Prepare construction transportation plan) would reduce the number of personal vehicle miles travelled by requiring that workers assemble at designated locations in order to carpool or be transported to work sites. Implementation of this measure would reduce this impact to a less than significant level (Class II), similar to the Proposed Project.

Impact T-3: Construction would conflict with planned transportation projects (Class II)

The project's proposed transmission lines would cross numerous roadways/transportation corridors and construction activities could potentially conflict with improvement projects along one or more of these transportation facilities. While there are no known planned transportation projects on the affected streets, if a transportation project were planned during the same interval as construction of the project in this area, then Mitigation Measure T-3a (Avoid conflicts with planned transportation improvements) would address this situation. The measure requires that potential conflicts with planned transportation improvements be avoided through coordination with the appropriate jurisdictions and agencies. Imple-

mentation of these measures would ensure that this impact is less than significant (Class II). The impact would be the same for both the Proposed Project and the alternative.

Impact T-4: Construction vehicles and equipment would potentially damage roads in the project area (Class II)

Underground construction in Iowa Street and across Orange Avenue and Barton Road would result in road damage that would require repair. Elsewhere, the use of roadways by heavy trucks and other equipment during project construction activities could potentially cause physical damage and/or deterioration of the road surface and other road features. Trenching or boring in public road ROWs outside Iowa Street also would damage the roadbed, requiring appropriate repair. The impacts to roads would be reduced to a less than significant level with the implementation of Mitigation Measure T-4a (Repair roadways damaged by construction activities) (Class II). Under the undergrounding alternative, somewhat more roadway would require repair than under the Proposed Project, but this would not result in a significant impact.

Impact T-5: Construction activities would cause a temporary disruption to rail traffic or operations (Class II)

The Iowa Street alternative would not affect a rail line. However, the Proposed Project would cross the Union Pacific Railroad and the Burlington Northern Santa Fe Railway rail lines. Transmission line stringing activities over the railroads could temporarily affect rail operations. SCE would be required to comply with railroad requirements in order to work in the rail ROW. This would reduce or eliminate potential disruption to rail service. With implementation of Mitigation Measure T-5a (Obtain required permits or approvals for crossing or working in railroad rights-of-way) this impact would be less than significant (Class II) for both the Proposed Project and the alternative.

Impact T-6: Construction would result in the short-term elimination of parking spaces (Class II)

While the alternative would eliminate some street parking along Iowa Street during construction, there is sufficient alternative parking in adjacent parking lots and nearby streets. Few residences front on the street and parking on the street in the project vicinity is infrequent. Overall, the Proposed Project could result in the short-term elimination of existing parking spaces along roadways and in shopping centers during project construction, including stringing and work in roadways. This impact would be reduced to a less than significant level by implementation of Mitigation Measure T-6a (Notify public of short-term elimination of public parking spaces) (Class II). This would be the same for both the Proposed Project and the alternative.

Impact T-7: Use of helicopters would have potential impacts on public safety and create nuisance conditions (Class II)

Helicopter use along Iowa Street is not anticipated under the Proposed Project or the undergrounding alternative. Use of helicopters elsewhere in project construction would require flights in and out of various yards and the carrying of passengers and external loads between yards and work sites. This would create potential safety and nuisance concerns. The loss of a suspended load or excessive noise and dust would be significant impacts. With implementation of Mitigation Measure T-7a (Prepare and implement a final helicopter use plan), SCE would be required to prepare and implement a plan that ensures safe operations, including the handling of external loads and specifying locations where helicopters would be allowed to fly and land. Dust and noise controls would be imposed to reduce nuisance effects, and

routes would be specified that avoid certain sensitive receptors. This would ensure that the impacts of helicopter use are less than significant (Class II) for both the Proposed Project and the alternative.

Impact T-8: Operations would affect aviation safety and activities associated with public airports (Class II)

Iowa Street is not near an airport. Neither the presence of poles nor the undergrounding of the 66 kV line here would affect aviation safety. At other locations along the Proposed Project and those portions of the project alternative not situated on Iowa Street, the presence of new structures or tall construction equipment could potentially affect aviation activities at local airports. SCE would be required to submit facility location and height information to FAA for review and approval. This would be within specific areas around airports and locations where facilities exceed 200 feet in height above ground level. Adherence to FAA requirements and implementation of Mitigation Measure T-8a (Obtain FAA review and approval of all structures and spans posing potential aircraft safety hazards) would ensure that construction and operation impacts to aviation activities would be less than significant (Class II) for both the Proposed Project and the alternative.

D.16.4.3 Phased Build Alternative

The Phased Build Alternative would retain existing double-circuit 220 kV transmission structures to the extent feasible, remove single-circuit structures, add new double-circuit 220 kV structures, and string all structures with higher-capacity conductors.

Eight impacts were identified under the Proposed Project for transportation and traffic. These impacts also would apply to the Phased Build Alternative, which would be located in the same corridor as the Proposed Project and would involve similar although less intense construction activities. The full text of all mitigation measures referenced in this section is presented in Section D.9.16.3, except where otherwise noted.

Impact T-1: Road or travel lane closures for construction would adversely affect traffic flow and congestion, emergency vehicle response, pedestrians/bicyclists routes, and access to adjacent residential and business properties

High-capacity conductors would be installed on a combination of new and existing 220 kV structures. This alternative would reduce the amount of construction activity compared to the Proposed Project, and consequently would reduce the number and duration of road or travel lane closures. The reconducted structures in this alternative would occur within the existing ROW and would not directly affect any roadways. While construction activities associated with this alternative could require road or travel lane closures, the severity of this adverse effect would be reduced compared to the Proposed Project due to the reduction in construction activities. Adverse traffic effects associated with this alternative would be addressed by implementation of Mitigation Measures T-1a (Prepare Construction Transportation Plan), T-1b (Prepare Traffic Control Plans), T-1c (Restrict lane closures), T-1d (Minimize disruption of bus and transit service), T-1e (Ensure pedestrian and bicycle circulation and safety), T-1f (Provide access to property), and LU-1a (Prepare Construction Notification Plan).

Impact T-2: Traffic related to project construction and operation would result in unacceptable levels of service on roadways in the project area

This alternative would reduce the amount of construction activity compared to the Proposed Project, and consequently would reduce the amount of peak-hour trip generation by workers and trips during the work day for the movement of cut-and-fill material, watering for dust control, concrete delivery, dis-

posal of old structures, and delivery of new structures. The impact would end with completion of construction. Traffic delays and adverse effects to levels of service on roadways in the project area are expected to be minor for this alternative. To reduce the number of personal vehicle miles travelled by workers, Mitigation Measure T-1a (Prepare construction transportation plan) would be required. The impact on levels of service in the project area would be similar for both the Proposed Project and the alternative (which includes less overall construction than the Proposed Project).

Impact T-3: Construction would conflict with planned transportation projects

This alternative would be constructed in the same ROW as the Proposed Project. The amount of construction activity would be reduced because one set of 220 kV structures would be left in place. The reconducted transmission line on both new and existing structures and other system upgrades in this alternative would cross numerous roadways/transportation corridors and construction of these components could potentially conflict with improvement projects along one or more of these routes. The public agencies that have jurisdiction over the affected roadways have been notified of the project through the Notice of Preparation/Notice of Intent, and encroachment permits or other such agreements must be obtained for each location where the project would interface with a roadway or other transportation facility. Compliance with local permits and agreements would ensure appropriate coordination between SCE and the affected agencies so that conflicts would be avoided or minimized. Avoidance of potential conflicts would be accomplished with implementation of Mitigation Measure T-3a (Avoid conflicts with planned transportation improvements), which would require coordination with transportation authorities in the project vicinity to ensure that conflicts do not occur.

Impact T-4: Construction vehicles and equipment would potentially damage roads in the project area

The use of roads in the project area would be reduced in this alternative compared to the Proposed Project. Vehicles, equipment, and materials would reach the new and existing reconductoring sites using the same roadways that would be used to reach the tower sites originally proposed; therefore, any potential damage to roads would be similar to the Proposed Project but reduced in severity due to the reduction in construction activity. Mitigation Measure T-4a (Repair roadways damaged by construction activities) would apply under both the Proposed Project and this alternative, ensuring that road damage from construction vehicles would be repaired.

Impact T-5: Construction activities would cause a temporary disruption to rail traffic or operations

The same as in the Proposed Project, this alternative would cross the Union Pacific (UP) Railroad and the Burlington Northern Santa Fe (BNSF) Railway in Segment 1 and the Union Pacific Railroad in Segment 4. Reconductoring activities for new and existing structures over the railroads could temporarily affect rail operations. Mitigation Measure T-5a (Obtain required permits or approvals for crossing or working in railroad rights-of-way) would be required for the Proposed Project and this alternative, which would cross the same rail lines.

Impact T-6: Construction would result in the short-term elimination of parking spaces

This alternative could result in the short-term elimination of existing parking spaces along roadways throughout the project area. Except for occasional restrictions on street parking during pole installations, during trenching or boring site work, or during conductor stringing across roadways, no other short-term elimination of parking is anticipated. Due to the reduction in construction activities, the short-term elimination of parking spaces would be reduced compared to the Proposed Project. Mitigation Measure

T-6a (Notify public of short-term elimination of public parking spaces) would be required to reduce the severity of this adverse effect.

Impact T-7: Use of helicopters would have potential impacts on public safety and create nuisance conditions

Although construction activity would be reduced in this alternative compared to the Proposed Project, it is assumed that the construction methods would be similar. If helicopters are used, the same requirements would apply to this alternative as in the Proposed Project. SCE would be required to implement Mitigation Measure T-7a (Prepare and implement a final helicopter use plan), which would be subject to CPUC and BLM approval and would specify flight and cargo carrying requirements that would protect public safety and minimize nuisances.

Impact T-8: Operations would affect aviation safety and activities associated with public airports

Although the exact location of structures in this alternative would differ compared to the Proposed Project, the structures would be located in the same ROW and would be of a comparable height. The impact of the Proposed Project and this alternative would be the same with regard to aviation safety. Towers and the conductor spans can pose hazards to aircraft. Implementation of Mitigation Measure T-8a (Obtain FAA review and approval of all structures and spans posing potential aircraft safety hazards) would address this adverse effect by requiring SCE to obtain FAA approval of tower locations. FAA would determine what restrictions may apply and whether specific towers and spans would require safety devices.

CEQA Significance Determination for Phased Build Alternative

The CEQA significance determination for each transportation and traffic impact in this alternative is presented below.

Impact T-1: Road or travel lane closures for construction would adversely affect traffic flow and congestion, emergency vehicle response, pedestrians/bicyclists routes, and access to adjacent residential and business properties (Class II)

Construction activities associated with this alternative could require road or travel lane closures. The severity of this impact would be reduced compared to the Proposed Project due to the reduction in construction activities. These closures and closures for work in road ROWs could adversely affect the flow of traffic and the level of congestion. Emergency service vehicles could be hindered in reaching their destinations regional and local bus service could be disrupted. Impacts to pedestrian and/or bicycle movements could occur and depending on the location of any needed trenching, access to adjacent properties could be adversely affected. These would be significant impacts if not addressed. Mitigation Measures T-1a (Prepare Construction Transportation Plan), T-1b (Prepare Traffic Control Plans), T-1c (Restrict lane closures), T-1d (Minimize disruption of bus and transit service), T-1e (Ensure pedestrian and bicycle circulation and safety), T-1f (Provide access to property), and L-1a (Prepare construction notification plan) include requirements that when implemented, would reduce this impact to a less than significant level (Class II).

Impact T-2: Traffic related to project construction and operation would result in unacceptable levels of service on roadways in the project area (Class II)

This alternative would reduce the amount of construction activity compared to the Proposed Project, and consequently would reduce the amount of peak-hour trip generation by workers and trips during the work day for the movement of cut-and-fill material, watering for dust control, concrete delivery, disposal of old structures, and delivery of new structures. The impact would end with completion of con-

struction. Mitigation Measure T-1a (Prepare construction transportation plan) would reduce the number of personal vehicle miles travelled by requiring that workers assemble at designated locations in order to carpool or be transported to work sites. Implementation of this measure would reduce this impact to a less than significant level (Class II).

Impact T-3: Construction would conflict with planned transportation projects (Class II)

The reconducted transmission line on both new and existing structures and other system upgrades in this alternative would cross numerous roadways/transportation corridors and construction of these components could potentially conflict with improvement projects along one or more of these routes. Mitigation Measure T-3a (Avoid conflicts with planned transportation improvements) requires that potential conflicts with planned transportation improvement be avoided through coordination with the appropriate jurisdictions and agencies. Implementation of these measures would ensure that this impact would be less than significant (Class II).

Impact T-4: Construction vehicles and equipment would potentially damage roads in the project area (Class II)

Any potential damage to roads would be similar to the Proposed Project but reduced in severity due to the reduction in construction activity. Overall, the use of roadways by heavy trucks and other equipment during project construction activities could potentially cause physical damage and/or deterioration of the road surface and other road features. Trenching or boring in public road ROWs would damage the roadbed, requiring appropriate repair. The impacts to roads would be reduced to a less than significant level with the implementation of Mitigation Measure T-4a (Repair roadways damaged by construction activities) (Class II).

Impact T-5: Construction activities would cause a temporary disruption to rail traffic or operations (Class II)

This alternative would cross two rail lines. Reconducting activities for new and existing structures over the railroads could temporarily affect rail operations. SCE would be required to comply with railroad requirements in order to work in the rail ROW. This would reduce or eliminate potential disruption to rail service. With implementation of Mitigation Measure T-5a (Obtain required permits or approvals for crossing or working in railroad rights-of-way) this impact would be less than significant (Class II).

Impact T-6: Construction would result in the short-term elimination of parking spaces (Class II)

This alternative could result in the short-term elimination of existing parking spaces along roadways throughout the project area. Due to the reduction in construction activities, the short-term elimination of parking spaces would be reduced compared to the Proposed Project. This impact would be reduced to a less than significant level by implementation of Mitigation Measure T-6a (Notify public of short-term elimination of public parking spaces) (Class II).

Impact T-7: Use of helicopters would have potential impacts on public safety and create nuisance conditions (Class II)

Although construction activity would be reduced in this alternative compared to the Proposed Project, it is assumed that the construction methods would be similar. If helicopters are used, the same requirements would apply to this alternative as in the Proposed Project. Use of helicopters in project construction would require flights in and out of various yards and the carrying of passengers and external loads between yards and work sites. The loss of a suspended load or excessive noise and dust would be significant impacts. The Federal Aviation Agency has jurisdiction over helicopters and pilots. However, with

implementation of Mitigation Measure T-7a (Prepare and implement a final helicopter use plan), SCE would be required to prepare and implement a plan that ensures safe operations, including the handling of external loads and specifying locations where helicopters would be allowed to fly and land. Dust and noise controls would be imposed to reduce nuisance effects, and routes would be specified that avoid certain sensitive receptors. This would ensure that the impacts of helicopter use are less than significant (Class II).

Impact T-8: Operations would affect aviation safety and activities associated with public airports (Class II)

Although the exact location of structures in this alternative would differ compared to the Proposed Project, the structures would be located in the same ROW and would be of a comparable height. SCE would be required to submit facility location and height information to FAA for review and approval. Adherence to FAA requirements and implementation of Mitigation Measure T-8a (Obtain FAA review and approval of all structures and spans posing potential aircraft safety hazards) would ensure that construction and operation impacts to aviation activities would be less than significant (Class II).

D.16.5 Environmental Impacts of No Project Alternative

D.16.5.1 No Project Alternative Option 1

The No Project Alternative Option 1 is described in Section C.6.3.1. It would consist of a new 500 kV circuit, primarily following the Devers-Valley transmission corridor and extending 26 miles between Devers Substation. It would also require a new 40-acre substation south of Beaumont, and 4 new 220 kV circuits extending 7 miles from the new Beaumont Substation to El Casco Substation, primarily following the existing El Casco 115 kV ROW. The remainder of the No Project Alternative, from El Casco Substation to the San Bernardino and Vista Substations, would be identical to the Proposed Project. Information on environmental resources and project impacts is derived from the Devers–Palo Verde 500 kV No. 2 Project EIR/EIS (CPUC and BLM, 2006) and the El Casco System Project Draft EIR (CPUC, 2007); which include nearly all of the No Project alignment.

No Project Alternative Transmission Lines and Beaumont Substation. The No Project Alternative Option 1 would primarily traverse remote and rural areas south of Interstate 10. The area has relatively few local roads and highways. There would be little or no opportunity for disrupting train and transit routes. During stringing operations across roads and highways, traffic would be controlled. Construction access to the substation site would be from Highway 79 (Beaumont Avenue) approximately 1 mile south of its interchange with I-10. Construction of remote sections of the transmission line likely would involve use of helicopters, as was the case in construction of the Devers-Valley 500 kV line. To minimize impacts, a traffic control plan, transportation plan, and helicopter use plan would be needed. Also, coordination with Caltrans, local roads departments, transit service providers, and rail roads would be needed to ensure minimal disruption. In the Devers to Valley segment of DPV2, the EIR/EIS identified that impacts on transportation from construction of the transmission line would be less than significant.

D.16.5.2 No Project Alternative Option 2

No Project Alternative Option 2 would require the construction of over 40 miles of new 500 kV transmission line, following the existing Valley-Serrano 500 kV line. The alternative is described in Section C.6.3.2, and illustrated on Figure C-6b.

With the exception of the urban areas in the Perris Valley at the eastern end of the route and the City of Orange at the western end of the route, the No Project Alternative Option 2 corridor traverses mostly rural and sparsely populated land. The corridor crosses two interstate highways and two state routes. In the east, the route crosses Interstate 215 at approximately MP 1.9 and SR 74 at approximately MP 7.4. Towards the center of the route, the corridor crosses Interstate 15 at approximately MP 20.6, just east of the Cleveland National Forest. At the western end, the corridor crosses SR 241 at approximately MP 36.2, just east of the City of Orange. Other than the interstate highways and state routes described above, the area has relatively few local roads and highways. There would be little or no opportunity for disrupting train and transit routes. During stringing operations across roads and highways, traffic would be controlled. Most of the route would be in or adjacent to the existing ROW, and would likely utilize existing access roads. Mitigation requirements would be the same as for Option 1.

D.16.6 Mitigation Monitoring, Compliance, and Reporting

Table D.16-11 presents the mitigation monitoring, compliance, and reporting actions for transportation and traffic.

Table D.16-11. Mitigation Monitoring Program – Transportation & Traffic

MITIGATION MEASURE	<p>T-1a: Prepare Construction Transportation Plan. Where construction traffic has the potential to significantly affect regional and local roadways by generating additional vehicle trips, SCE shall prepare a Construction Transportation Plan (CTP) describing alternate traffic routes, timing of commutes, methods of reducing crew-related traffic, and other methods for reducing construction-generated additional traffic on regional and local roadways. The CTP also shall require construction workers to park personal vehicles at yards or designated assembly points and carpool to work locations in order to limit the number of construction-related vehicles on the road. At construction sites, vehicles shall be required to park within the project ROW or approved disturbance area or on access roads to the maximum extent possible. Parking shall not be permitted in areas with dry vegetation that could pose a fire hazard. SCE shall submit the CTP to Caltrans and the affected local jurisdictions for review and approval at least 30 days prior to commencing construction activities.</p> <p>At least 15 days prior to construction, SCE shall provide a letter or email to CPUC and BLM confirming that the mitigation measure has been executed and shall provide a copy of the final CTP. This communication shall identify persons or agencies contacted, contact information, and the date of contact, and shall summarize discussions and/or agreements reached, if any.</p>
Location	Entire project
Monitoring / Reporting Action	CPUC/BLM monitors confirm all aspects of plan are implemented.
Effectiveness Criteria	Plan is implemented
Responsible Agency	CPUC/BLM
Timing	30 days prior to construction.
MITIGATION MEASURE	<p>T-1b: Prepare Traffic Control Plans. Prior to the start of construction and as part of the required traffic encroachment permits, SCE shall submit Traffic Control Plans (TCPs) to agencies with jurisdiction over the public roads that would be affected by overhead or underground construction. The measures included in the TCPs shall be consistent with the California Joint Utility Traffic Control Manual and the standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, the U.S. Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD), and the Work Area Traffic Control Handbook (WATCH).</p> <p>Road Safety</p> <p>TCPs shall identify:</p> <ul style="list-style-type: none"> ▪ the locations of all roads or traffic lanes that would need to be temporarily closed due to construction activities, including aerial hauling by helicopter and conductor stringing activities

Table D.16-11. Mitigation Monitoring Program – Transportation & Traffic

- the use of flag persons, warning signs, lights, barricades, cones, and similar means to provide safe work areas and to warn, control, protect, and expedite vehicular and pedestrian traffic
- use of guard poles, netting, or similar means to protect moving traffic and structures for any construction or installation work requiring the crossing of a local street, highway, or rail line
- the use of continuous traffic breaks operated by the California Highway Patrol on state highways.
- measures to avoid disruptions or delays in access for emergency service vehicles (such as immediately stopping work for emergency vehicle passage, short detours, and alternate routes developed in conjunction with local agencies).

Emergency Services

Police departments, fire departments, ambulance services, and paramedic services shall be notified at least 30 days in advance by SCE of the proposed locations, nature, timing, and duration of any construction activities affecting roads and advised of any access restrictions that could impact their effectiveness. TCPs shall also include measures ensuring work crews are ready at all times to accommodate emergency vehicles, such as having the ability to immediately stop work for emergency vehicle passage and implement short detours and alternate routes developed in conjunction with local agencies. TCPs also shall identify all emergency service agencies, include contact information for those agencies, assign responsibility for notifying service providers, and specify coordination procedures.

Copies of the TCPs shall be provided to the CPUC, BLM, [Caltrans](#), the planning or traffic departments of the affected local jurisdictions, and all affected police departments, fire departments, and ambulance and paramedic services. Documentation of coordination with service providers shall be provided to the CPUC and BLM at least 30 days prior to the start of construction.

Location	Entire project length.
Monitoring / Reporting Action	CPUC/BLM verifies that plans are submitted and are implemented during construction as required.
Effectiveness Criteria	Traffic Control Plans meet requirements and are distributed as indicated. Plans are implemented during construction.
Responsible Agency	CPUC/BLM
Timing	At least 30 days prior to start of construction.
MITIGATION MEASURE	T-1c: Restrict lane closures. To minimize traffic congestion and delays during construction, SCE shall restrict all necessary lane closures or obstructions on major roadways (as designated by applicable County and City General Plans) associated with overhead construction activities to off-peak traffic periods. Unless absolutely necessary, lane closures must not occur between the peak hours of 6:00 and 9:00 a.m. and 3:30 and 6:30 p.m., or as directed in writing by the affected public agency in the encroachment permit
Location	Where construction occurs in, adjacent to, or across major roadways.
Monitoring / Reporting Action	CPUC/BLM verifies land closures are in compliance
Effectiveness Criteria	Land closures meet the mitigation measure requirements, or others as directed by agency with jurisdiction over roadway.
Responsible Agency	CPUC/BLM
Timing	During construction in or adjacent to roadways

Table D.16-11. Mitigation Monitoring Program – Transportation & Traffic

MITIGATION MEASURE	T-1d: Minimize disruption of bus and transit service. SCE shall coordinate with local and regional agencies or organizations providing regular bus or transit service in the project area at least 30 days prior to construction to reduce potential interruption of these services. At least 15 days prior to construction, SCE shall provide a letter or email to CPUC and BLM confirming that the mitigation measure has been executed. This communication shall identify persons or agencies contacted, contact information, and the date of contact, and shall summarize discussions and/or agreements reached, if any.
Location	Entire project area
Monitoring / Reporting Action	Confirm the coordination has occurred
Effectiveness Criteria	SCE coordinates with agencies and organizations as required
Responsible Agency	CPUC/BLM
Timing	Coordination to occur at least 30 days prior to construction.
MITIGATION MEASURE	T-1e: Ensure pedestrian and bicycle circulation and safety. Where construction will result in temporary closures of sidewalks or other pedestrian facilities, SCE shall provide temporary pedestrian access, through detours or safe areas along the construction zone. Where construction activity will result in bike route or bike path closures, appropriate detours shall be established, and detour signs shall be posted. Detours and closures required for safe pedestrian and bicycle access through or around the construction area shall be identified in a circulation plan included in the TCP's required under Mitigation Measure T-1b. All detours and related signage shall be consistent with the standard guidelines outlined in the U.S. Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD).
Location	Entire project length.
Monitoring / Reporting Action	CPUC/BLM verifies that TCPs include pedestrian and bicycle circulation and safety, and that measures are implemented during construction as required.
Effectiveness Criteria	Traffic Control Plans includes pedestrian and bicycle circulation safety requirements as indicated. Plans are implemented during construction.
Responsible Agency	CPUC/BLM
Timing	30 days prior to start of construction (as part of TCPs under Mitigation Measure T-1b).
MITIGATION MEASURE	T-1f: Provide access to property. When construction activities block access to a property and the property includes a residence or business, SCE shall work with the property owner, tenant, or business owner to provide reasonable alternate access. If construction involves trenching across or in front of the property's point of access and alternative access is not available, SCE shall lay a temporary steel plate trench bridge as needed and upon request in order to ensure access when not actively constructing at the affected location.
Location	Any location where construction would block property access.
Monitoring / Reporting Action	Mitigation measure is implemented and a means of access is provide when needed.
Effectiveness Criteria	Alternative means of access or temporary access are provided
Responsible Agency	CPUC/BLM
Timing	During construction that blocks access to a property
MITIGATION MEASURE	T-3a: Avoid conflicts with planned transportation improvements. Prior to final project design SCE shall review project plans with Caltrans and local traffic departments or public works departments of the counties and the individual cities through which the proposed transmission route. The review will be conducted to identify planned transportation projects potentially affected, to ensure that Project structures are placed to avoid conflict with any planned transportation projects, and to inform the jurisdictions of the timing and location of any trenching or boring that may affect road surfaces and the flow of traffic. If there are conflicts they shall be addressed through mutual agreement of SCE and the jurisdiction. At least 15 days prior to construction, SCE shall provide a letter or email to CPUC and BLM

Table D.16-11. Mitigation Monitoring Program – Transportation & Traffic

	confirming that the mitigation measure has been executed. This communication shall identify persons or agencies contacted, contact information, and the date of contact, and shall summarize discussions and/or agreements reached.
Location	Entire project length
Monitoring / Reporting Action	Coordination is confirmed.
Effectiveness Criteria	SCE coordinates with agencies having jurisdiction for transportation improvements regarding structure locations and work in or across roads
Responsible Agency	CPUC/BLM
Timing	Prior to final design
MITIGATION MEASURE	<p>T-4a: Repair roadways damaged by construction activities. If roadways, sidewalks, medians, curbs, shoulders, or other such features are damaged by the project's construction activities, as determined by the affected public agency, such damage shall be repaired and streets restored to their pre-project condition by SCE. Prior to construction, SCE shall confer with agencies having jurisdiction over the roads anticipated to be used by delivery vehicles and equipment. <u>Unless an alternative method for determining roadway condition is required by a given jurisdiction, At</u> least 30 days prior to construction, SCE shall photograph or video record all construction route public roads within 500 feet in each direction of project access points (i.e., locations where vehicles leave public roads to reach project sites) <u>and roadways where the road surface will be damaged by project-related trenching or digging</u>, and shall provide the respective local jurisdictions, CPUC, BLM, and Caltrans (if applicable) with a copy of these images.</p> <p>At least 15 days prior to construction, SCE shall provide a letter or email to CPUC and BLM confirming that the mitigation measure has been executed. This communication shall identify persons or agencies contacted, contact information, and the date of contact, and shall summarize discussions and/or agreements reached.</p> <p>At the end of major construction, SCE shall coordinate with each affected jurisdiction to confirm what repairs are required. Any damage is to be repaired to the pre-construction condition within 60 days from the end of all construction, or on a schedule mutually agreed to by SCE and the jurisdiction. SCE shall provide CPUC and BLM <u>confirming</u> documentation <u>when the coordination has been completed and when the confirming the coordination and</u> repairs have been completed.</p>
Location	Public roads within 500 feet of project access points used by construction traffic.
Monitoring / Reporting Action	Pre-construction coordination, and submission of documentation and post-construction execution of repairs are confirmed.
Effectiveness Criteria	Pre-construction conditions are documented and post-construction repairs are made, if required.
Responsible Agency	CPUC/BLM
Timing	At least 30 days prior to construction document roadways. At least 15 days prior to construction document actions taken. Within 60 days of end of all construction, or as mutually agreed by SCE and the jurisdiction, repair damage.
MITIGATION MEASURE	<p>T-5a: Obtain required permits or approvals for crossing or working in railroad rights-of-way. SCE shall obtain permits/approvals from affected railway operators (Union Pacific Railroad and Burlington Northern Santa Fey Railway) to ensure project construction activities in the rail ROW comply with each company's safety requirements and to avoid disruption to rail traffic. Copies of required permits or approvals shall be submitted to the CPUC and BLM <u>at least 60 days</u> prior to construction in or across rail ROWs.</p>
Location	At railroad crossings
Monitoring / Reporting Action	CPUC/BLM monitor verifies that SCE has obtained permits/approvals
Effectiveness Criteria	Required permits/approvals obtained to work in railroad ROW
Responsible Agency	CPUC/BLM

Table D.16-11. Mitigation Monitoring Program – Transportation & Traffic

Timing	60 days p Prior to construction in or across rail ROWs
MITIGATION MEASURE	T-6a: Notify public of short-term elimination of public parking spaces. As required in Mitigation Measure LU-1a, prior to construction activity on major roadways, using media such as local newspapers and on-site postings, SCE shall notify the public of the potential for public parking spaces to be temporarily eliminated and identify where temporary parking spaces would be located. This requirement shall apply when more than five parking spaces are affected. The elimination of parking and location of alternative parking must be in conformance with the requirements of agencies responsible for parking management.
Location	Construction activity in all segments.
Monitoring / Reporting Action	CPUC/BLM monitor verifies that SCE submits Construction Notification Plan, which identifies complete notification and public inquiry process.
Effectiveness Criteria	Residents, landowners and others potentially impacted are informed of construction activities and potential impacts on parking.
Responsible Agency	CPUC/BLM
Timing	Plan submitted forty-five days prior to construction; public venue notices 30 days prior to construction; public notice mailer and newspaper advertisements 15 days prior to construction.
MITIGATION MEASURE	<p>T-7a: Prepare and implement a final helicopter use plan. SCE and its contractor shall prepare and obtain approval of a Final Helicopter Use Plan prior to using helicopters to transport personnel, materials, or equipment for the deconstruction of existing project facilities or construction of new or replacement project facilities. The Final Helicopter Use Plan shall draw upon protocols and methods used on previous transmission line projects and shall be submitted to CPUC and BLM for approval.</p> <p>The Federal Aviation Agency (FAA) has jurisdiction over U.S. airspace, aircraft, aircraft operations, airports, and pilots. To the extent that they do not conflict with any FAA requirements, the following shall apply to helicopter use and be incorporated in the Final Helicopter Use Plan.</p> <ul style="list-style-type: none"> ▪ All aircraft and pilots shall be in full compliance with applicable FAA requirements and standards. ▪ On the prior day, helicopter flight information shall be provided to CPUC/BLM monitors regarding the specific sites to be used for helicopter picks and the destination of the materials or assemblages being lifted out. ▪ Daily flight notifications shall be issued by e-mail prior to commencement of any project flight activity. Information provided in the e-mail shall include pilot name, contact number, aircraft type, aircraft registration number, aircraft color, work/flight area, beginning time, estimated completion time, and scope of work. This information will be provided to CPUC/BLM monitors as well. ▪ The specific facilities, towers, poles, and spans requiring deconstruction or construction using helicopters shall be identified. ▪ Temporary staging of materials and assembly of tower sections outside of approved yards shall not occur without prior approval of CPUC or BLM, as appropriate. ▪ The yards to and from which helicopters would fly (fly yards) shall be identified and shall be of sufficient size to ensure safe operations, given the other activities occurring at the yards and the vicinity. ▪ Fly yards shall be sufficiently far from occupied residences to not create an unacceptable level of noise or dust. ▪ The means used for dust and noise control and for safe refueling shall be specified for each fly yard. ▪ Flight paths that minimize flights near schools, hospitals, nursing homes, and other sensitive group receptors shall be identified and followed. ▪ Except in an emergency, helicopters shall land or hover near the ground only in areas previously approved for landing, and all dust control and biological and cultural resource protection requirements shall apply.

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- External loads will be secured by appropriate rigging, including boxing, netting, choking, and cabling, or other suitable means. Only qualified riggers shall prepare and attach external loads to helicopters, and rigging shall be appropriate to the nature of the load, including the use of devices as necessary to prevent materials being lost in flight. Where appropriate to reduce load in-flight spinning and movement, drag chutes will be attached to loads. The need for drag chutes will be determined by the pilot and rigging personnel, where appropriate. At locations where rigging is to occur, a sufficient supply of appropriate rigging and containment materials in good repair shall be on hand at all times.
- All aircraft are to be configured with weight sensors such that, when preparing to haul external loads, the pilot is able to determine the weight of the load being lifted
- Yards or landing zones shall have a designated qualified individual managing the movement of aircraft in and out of the yard or landing zone when flight activity is high.
- Appropriate protocols for communication among pilots and between pilots and the ground shall be developed and implemented.
- A GPS-based data system shall be installed in each aircraft
 - The system shall identify for the pilot all project-approved project flight paths and those areas where overflights are restricted (such as seasonally restricted bird nesting areas and sensitive residential or institutional areas), and shall be updated as often as any flight restrictions are implemented or lifted.
 - The system shall automatically record and preserve flight data sufficient to identify the aircraft's flight path, including altitude above ground. The system shall be capable of providing the information required with regard to flight path and aircraft identifier, and provide a location "ping" no less frequently than once every 3 seconds. These data shall be collected daily and maintained by SCE or its contractor for a period of no less than six months and made available to CPUC or BLM upon request.

The Helicopter Use Plan shall be submitted to CPUC and BLM for review and approval at least 60 days prior to the use of helicopters on the project. Once the Helicopter Use Plan is made final, a copy shall be provided as a courtesy to each jurisdiction through which the Project passes.

Location	Project wide
Monitoring / Reporting Action	CPUC/BLM reviews and approves plan. Monitors confirm that all requirements of mitigation measure are implemented
Effectiveness Criteria	Plan is fully implemented
Responsible Agency	CPUC/BLM
Timing	During all operations involving helicopters
MITIGATION MEASURE	T-8a: Obtain FAA review and approval of all structures and spans posing potential aircraft safety hazards. SCE shall submit required forms and information to FAA for its review and approval of transmission structures and conductor spans that may require installation of safety devices or other restrictions. Copies of FAA's review and approval shall be provided to CPUC and BLM at least 60 days prior to erection of structures or installation of conductors that would be in violation of FAA standards and requirements. These structures and spans shall be identified to CPUC and BLM, and the planned installation of required lighting and marker balls described.
Location	Entire project.
Monitoring / Reporting Action	CPUC/BLM monitors receive evidence of FAA review and approval
Effectiveness Criteria	FAA has concurred in towers and spans requiring safety devices
Responsible Agency	CPUC/BLM
Timing	60 days prior to erecting structures or installing conductors that would violate FAA standards and requirements.

D.16.7 References

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Attachment D.16-1: SCE Preliminary Helicopter Use Plan

West of Devers Upgrade Project Preliminary Helicopter Use Plan

December 18, 2013

The following preliminary plan describes how helicopter operations are anticipated to be conducted on the WOD Upgrade Project. Other commitments and responsibilities of SCE and its contractors may apply in addition to those identified here.

Federal Aviation Administration (FAA)

- At a minimum, helicopter operations will comply with applicable FAA regulations and requirements. This includes pilot qualifications, aircraft airworthiness, and use of FAA-approved practices and equipment, where applicable.

General Helicopter Usage

- Project-related helicopter activities for the construction of the transmission lines could include delivery of equipment and materials from construction staging yards to structure sites, hardware installation, and conductor and/or optical ground wire (OPGW) stringing operations.
- Helicopter models assumed to be used would include the Bell 500 (MD 500) and Kaman Kmax (or equivalent light and medium duty helicopters).
- Project-related helicopter activities during construction of the transmission lines could occur across the entire project area.
- Helicopters may land in any approved disturbance area, including tower sites, pull sites, and access or spur roads.
- Prior to commencement of construction, SCE and its contractor will develop detailed flight routes to minimize flight into sensitive areas and to avoid aircraft congestion.

Helicopter-based Tower Construction

- Helicopter-based tower construction is not anticipated. However, in the event that helicopter-based tower construction is deemed necessary, the following would apply:
 - Towers sections would be assembled at the construction staging yards and hauled by helicopter to the designated tower sites and lowered into place.
 - Tower site and foundation preparation equipment and materials would be ferried to the site by helicopter or delivered by road.
 - SCE may temporarily stage materials and/or assemble tower sections at previously approved tower and wire pull sites that are road-accessible. These activities will be specific to construction planned to occur at helicopter-constructed tower sites.
 - SCE will provide CPUC monitors a list of the areas to be used for this temporary purpose, and will identify the material or assemblages to be staged at each site and the tower sites where the materials or assemblages are to be used.
- A helicopter will transport staged materials or tower sections from the approved sites to their destinations. When materials or assemblages are to be delivered to and retrieved by helicopter from temporary staging sites described above, the following procedures will be followed:
 - Prior notice will be given in the daily helicopter flight information provided to agency monitors regarding the specific sites that will be used for helicopter picks that day and the destination of the materials or assemblages being lifted out.
 - Dust control measures will be implemented to assure that fugitive dust is not generated during picking operations. Also, all other applicable mitigation measures and requirements (e.g., clearance surveys and sweeps, notices to sensitive receptors, etc.) will be implemented prior to and during the helicopter pick activity.

Rigging and Hauling

- External loads will be secured by rigging, including boxing, netting, choking, and cabling, or other appropriate means. Where appropriate to reduce load in-flight spinning and movement, drag chutes will be attached to loads. The use of drag chutes will be determined by the pilot and rigging personnel, where appropriate.
- All helicopter landing areas and tower site locations at which external load rigging occurs will have ample load containment materials (e.g., covered boxes, netting, drag chutes) to ensure that the appropriate containment practices can be implemented at all times.

Flight Management

- Fly Yard Coordinators (FYCs) will be responsible for coordinating all helicopter activities at yards.
- All pilots entering an area of operations will communicate with both the FYC and other pilots to establish the location of other helicopter traffic, establish traffic patterns, and yard and worksite conditions.
- SCE and its contractor will use Garmin GPS units in helicopters to track and record flights. Helicopters may have/use other tracking systems (other than Garmin); however, the system use will be capable of providing the

information required with regard to flight path and aircraft, and will provide a 'ping' no less frequently than once every 3 seconds.

- GPS data showing buffers, corridors, and other pertinent restrictions will be distributed to SCE and contractor helicopter operations to keep pilots informed of flight restrictions.
- GPS data will be updated daily or as often as new restrictions are implemented or lifted.
- Daily flight notifications are issued prior to commencement of any project flight activity via email. Information provided in the e-mail includes pilot name, contact number, aircraft type, aircraft registration number, aircraft color, work/flight area, beginning time, estimated completion time and scope of work. This information will be provided to the CPUC and its designate representative as well.

Data Management

- Designated CPUC representatives will receive the project's GPS emails updating project external load flight corridors, nesting bird buffers, and other sensitive areas to be avoided.
- Onboard GPS flight tracking data for both SCE and contractor aircraft will be downloaded and e-mailed daily to a designated person at SCE for any project helicopter that has flown that day. SCE will store this data for a minimum of 30 days.
- Upon request, SCE will provide the CPUC or its representative full access to flight track data for the purpose of conducting reviews. Agency representatives will be included on GPS emails and daily helicopter schedules.
 - Flight track data requested by CPUC will be made available within 2-3 business days of the request being submitted.
 - Responses to flight track requests should be prepared and presented as an electronic screenshot for the requested area(s) using a Google Earth or similar base map. Flight tracks should also be available for CPUC review on a Garmin Basecamp map for a secondary point of reference for ensuring accuracy.
 - Flight track screenshots should be legible and show all helicopter flight data, designated external load flight corridor, and all current nesting bird and any other sensitive area buffers within each requested area.

Other Conditions

- To address load limitations imposed by air temperature and elevation, pilots will exercise due diligence in performing the necessary calculations using the Flight Manual and available meteorological and load data. The pilot will conduct a pre-shift (i.e., before the pilot and aircraft are going on duty) "Load Calculation" based upon the given and anticipated weather conditions and, in particular, the temperatures and the operating altitudes to be encountered. The resulting load calculation values will be communicated to Rigging Specialists working with each aircraft.
- All aircraft are to be configured with weight sensors such that, when preparing to haul external loads, the pilot is able to determine the weight of the load being lifted.
- During stringing operations, no sock line or conductor would be located outside of approved and secured work areas unless previously identified to ensure public safety.
- During external load hauling, traffic controls will be in place on roads and heavily used trails crossed by the flight.