

C.14 Transportation and Circulation

This section analyzes whether the Revised Project and PG&E Upgrades would result in any new significant impacts to transportation and circulation that were not previously identified and disclosed in the 2010 Final EIR, or whether there would be a substantial increase in the severity of any previously identified impacts. This analysis investigates changes to the existing roadways and traffic in the study area, changes to the traffic flow associated with the project, and changes to potential transportation and circulation impacts and related mitigation measures.

Data sources that were used for this analysis include traffic volume data from California Department of Transportation, general traffic standards from Fresno County General Plan's Transportation and Circulation Element (Fresno County, 2014), and the results of a new traffic study prepared by Hexagon Transportation Consultants, Inc. (Hexagon, 2014).

C.14.1 Environmental Setting

Section C.14.1.1 summarizes the environmental setting from the 2010 Final EIR and describes changes to the environmental setting that have occurred since 2010. Section C.14.1.2 describes the environmental setting for the area surrounding the PG&E upgrades.

C.14.1.1 Revised Solar Project

The transportation and circulation setting for the Revised Project site is substantially the same as it was at the time of approval of the Final EIR. Panoche Valley remains generally undeveloped and pastoral in character. No new development has occurred, and no major new structures have been built in the valley. No new roads or highways have been built within the study area, and no new demands have been placed on the existing transportation infrastructure. The southern boundary of the solar project site is approximately 0.75 miles north of the intersection of Panoche Road and Little Panoche Road, in eastern San Benito County. The site extends 6 miles from its western to eastern ends, and is located approximately 2 miles southwest of the Fresno County Line and the Panoche Hills, and approximately 15 miles west of Interstate 5 and the San Joaquin Valley.

The regional roadways would be used by construction and operational vehicles are shown on Figure B-1 (Project Location, Section B) and include Interstate 5 (I-5), State Route 25, Panoche Road, and Little Panoche Road. Major roadways in this region are within the jurisdictions of the following agencies: California Department of Transportation (Caltrans) District 5 (including all of San Benito County), Caltrans District 6 (including all of Fresno County), the County of San Benito, the County of Fresno, and the California Highway Patrol (CHP). As proposed, the Applicant intends to route project-related commuter traffic along State Route 25 (a Caltrans facility) and truck traffic (including oversize loads that would require permits) along I-5 (also a Caltrans facility). The roads that would provide direct access to the Project site (i.e., roadways from which vehicles would turn directly onto the project site) are local roadways under the jurisdiction of the County of San Benito. Panoche Road and Little Panoche Road are described below (and in more detail in the 2010 Final EIR).

Panoche Road provides the most used entrance to the Panoche Valley. The segment of Panoche Road between SR 25 and Little Panoche Road, which would be used to access the site, it is classified as rural major access road since it serves very low volumes. Encounters between vehicles that present opportunities for crashes are rare. There is another segment of Panoche Road east of Little Panoche Road that is partially unpaved, and classified as either a rural industrial/agricultural road or rural

resource recovery road; however, that segment would not be used for project access and would not be affected by project traffic during construction or once the project is operational.

American Association of State Highway and Transportation Officials Guidelines specify a minimum roadway width of 18-20 feet for rural major access roadways with design speeds of 35-45 mph.¹ Panoche Road is generally 18 – 20 feet wide, but there are bridges that narrow to as little as 14 feet wide. The minimum widths also do not account for maneuverability and off-tracking of large trucks. There are several sharp curves through the mountainous sections of Panoche Road in which sight distance is restricted by mountain slopes and vegetation.

Little Panoche Road is also classified as a rural major access road. Field measurements indicated sections of the roadway that were as narrow as 16 feet. Typical width of large trucks is 8.5 feet. Thus, the sections of roadway are narrower than the recommended 18 feet would not be adequate to accommodate two-way travel of large trucks.

Traffic Conditions

Existing roadway and traffic conditions on the routes expected to be used by Project-related construction traffic are shown in Table C.14-1 (Existing Roadway Segment Traffic Volumes) and are described in more detail in the 2010 Final EIR. Analysis of roadways is based on information obtained from a detailed 2010 traffic study and a 2014 follow up traffic study for the Revised Project prepared by Hexagon Transportation Consultants, as well as from the Caltrans Transportation Concept Reports for SR-25 and I-5, and Caltrans traffic volume data.²

Table C.14-1. Existing Roadway Segment Traffic Volumes

| Location | Direction | ADT ¹ | AM Peak ² | Mid-Day Peak ³ | PM Peak ⁴ |
|--|--------------|------------------|----------------------|---------------------------|----------------------|
| Little Panoche Road (North of Panoche Road) | NB | 32 | 6 | 6 | 4 |
| | SB | 34 | 1 | 5 | 6 |
| | Total | 66 | 7 | 11 | 10 |
| Panoche Road (East of Little Panoche Road) | NB | 76 | 15 | 12 | 5 |
| | SB | 76 | 10 | 20 | 11 |
| | Total | 152 | 25 | 22 | 16 |
| Panoche Road (West of Little Panoche Road) | NB | 95 | 25 | 19 | 6 |
| | SB | 81 | 7 | 10 | 10 |

¹ The adequacy of the geometric design of Panoche and Little Panoche Roads to serve project traffic was evaluated based on roadway functionality and design standards presented in American Association of State Highway and Transportation Officials (AASHTO) Geometric Design Manual. Both Panoche and Little Panoche Roads are County-designated roadways that serve very low volumes; the primary purpose of these roadways is to provide access to adjacent properties. Therefore, the direct application of design standards intended for urban roads that serve through traffic are not solely appropriate for either roadway. AASHTO provides supplemental design guidelines in their *Geometric Design of Very Low-Volume Local Roads (ADT<400)* publication that provides guidance in the evaluation of roadway geometrics for roadways similar to Panoche and Little Panoche Roads.

² The Hexagon Traffic Study includes evaluation of roadway geometrics, pavement conditions, vehicular speeds, vehicle composition, sight distance, and existing signage along each of the roadways. Intersection levels of service analysis and signal warrant checks also were completed at the intersections of SR 25 and Panoche Road and Panoche Road and Little Panoche Road.

Table C.14-1. Existing Roadway Segment Traffic Volumes

| Location | Direction | ADT ¹ | AM Peak ² | Mid-Day Peak ³ | PM Peak ⁴ |
|---|-----------|------------------|----------------------|---------------------------|----------------------|
| | Total | 176 | 32 | 29 | 16 |
| Panoche Road (East of Cottonwood Road) | NB | 159 | 21 | 13 | 18 |
| | SB | 163 | 17 | 20 | 20 |
| | Total | 322 | 38 | 33 | 38 |

1 - ADT = Average Daily Traffic Volume

2 - Highest AM peak-hour volume of the two surveyed dates (6:00 am–9:00 am)

3 - Highest mid-day peak-hour volume of the two surveyed dates (11:00 am–2:00 pm)

4 - Highest PM peak-hour volume of the two surveyed dates (3:00 pm–6:00 pm)

Source: Hexagon, 2010

C.14.1.2 PG&E Upgrades

The proposed PG&E transmission upgrades would be located in San Benito County (7 miles) and Fresno County (10 miles). The Call Mountain microwave tower is in San Benito County (west of the solar site); the Panoche Mountain microwave tower and the Helms Substation are in Fresno County. Most of the PG&E work would consist of overhead installation of optical ground wire (OPGW) on existing transmission towers and installation of approximately 9 permanent wooden poles over a 4,650-foot section of transmission line. In addition, the PG&E upgrades would include up to 12 new transmission structures that are required to tie the existing Moss Landing–Panoche 230 kV transmission line into the proposed PG&E switchyard, located within the Revised Project site boundaries. The new transmission structures would be installed by PG&E after site preparation is completed by the Applicant

Work areas for PG&E upgrades would be accessed from existing roads, including Panoche Road east of Little Panoche Road. PG&E’s OPGW installation along the 17-mile segment would be completed in approximately 12-16 weeks, and at any one location the construction would take from 2 to 3 weeks. Helicopters would be used to transport electrical workers to the towers, deliver materials, and assist in pulling the OPGW from tower to tower. This work would not require any road closures, although brief delays may be required during OPGW stringing with helicopters.

Construction work for microwave towers is described in Section B.11.2.1 of the Project Description. Work would take approximately 2 to 3 weeks at each site and would utilize existing roads for access. Each of these microwave tower locations is situated in an area with existing access roads. The Panoche Valley Substation at the project site would be accessed by Panoche Road or Little Panoche Road. Call Mountain microwave tower site would be collocated on an existing microwave tower at the CALFIRE station with existing access roads. Panoche Mountain microwave tower site would be collocated on an existing tower or constructed at an existing CHP station with existing access. Helm Mountain microwave tower site is located at an existing PG&E substation with existing access.

C.14.2 Applicable Regulations, Plans, and Standards

The applicable regulations, plans, and standards that apply to the assessment of transportation and circulation impacts within the Project area are presented in Section C.14.2 of the Final EIR. No changes have occurred to the San Benito County regulatory setting for transportation and circulation since 2010. The Fresno County General Plan’s Transportation and Circulation Element (Fresno County, 2014) establishes standards for the County’s transportation and highway systems. The general standards for right-of-way, access control, and planned travel lanes for each roadway class in the County are shown in Table TR-1 in the Transportation and Circulation Element.

C.14.3 Environmental Impacts and Mitigation Measures

This section addresses whether the changes to the Approved Project would result in any new significant traffic impacts or increase the severity of previously identified traffic impacts. Section C.14.3.1 restates the significance criteria used in 2010 to determine whether any project changes result in any new or more severe significant impacts. Section C.14.3.2 summarizes the impacts and mitigation measures presented in the 2010 Final EIR for ease of reference. Section C.14.3.3 presents the updated impact analysis for the Revised Project, and Section C.14.3.4 addresses the addition of one new mitigation measure. Section C.14.3.5 addresses the environmental impacts that would occur as a result of the PG&E Upgrades, and Section C.14.3.6 describes cumulative impacts.

C.14.3.1 Significance Criteria

The following significance criteria for transportation and circulation were derived from the Environmental Checklist in CEQA Appendix G. These significance criteria were used for the 2010 Final EIR and are also applied to this Supplemental EIR. They have been amended or supplemented, as appropriate, to address the nature of solar photovoltaic (PV) facilities and transmission line upgrades in general, and the full range of potential impacts related to this Revised Project in particular. An impact of the Revised Project and PG&E Upgrades would be considered significant and would require mitigation if:

- Construction would create unsafe conditions on public roadways, such as limited access, unsafe design features, reduced sight distance, slow vehicles, damage to public roads, etc.; or
- The project would cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, congestion at intersections or individually or cumulatively exceed a level of service standard established by the County congestion management agency for designated roads or highways). As provided by Policy 4 of the Transportation Element of the San Benito County General Plan, the minimum level of service standard of County roadways is LOS C.

Significance conclusions are presented regarding the significance of each identified transportation and circulation impact, per the significance classification system provided in Section C.1 (Introduction to Environmental Analysis).

C.14.3.2 Approved Project Impacts and Mitigation Measures

Table C.14-2 presents a summary of the impacts and mitigation measures applicable to the Approved Project.

Table C.14-2. Summary of Impacts and Mitigation: Transportation and Circulation

| Impact No and Text | Mitigation Required | CEQA Conclusion |
|--|--|-----------------|
| Impact TR-1: Construction would create unsafe conditions on public roadways. | TR-1.1: Implement traffic control plan. TR-1.2: Rehabilitate, and monitor roadway pavement. TR-1.3: Repair roadway damage. | Class II |
| Impact TR-2: Project implementation would increase congestion and travel delays on regional and local roadways or exceed an established level of service standard. | TR-1.1: Implement traffic control plan. | Class II |

Table C.14-2. Summary of Impacts and Mitigation: Transportation and Circulation

| Impact No and Text | Mitigation Required | CEQA Conclusion |
|--|---------------------|-----------------|
| Impact TR-3: Contribute to cumulatively considerable transportation and circulation impacts. | None. | Class III |

C.14.3.3 Revised Solar Project Impacts

Two transportation and circulation impacts are addressed in this section; cumulative impacts are evaluated in Section C.14.3.6.

Traffic-related impacts from operations and decommissioning would be similar for the Revised Project as for the Approved Project. Construction impacts would occur during a shorter time period than described in the 2010 Final EIR; construction would take place over 18 months rather than over 5 years. Therefore, traffic impacts would be shorter in duration, but more intense over the 18 month construction period. This analysis reflects the shorter construction schedule and increased personnel requirements for the Revised Project.

Workforce and Daily Vehicle Trips. The workforce at the project site would vary based on the work activities conducted and time of year. However, a peak of approximately 550 employees per day is expected on site at any one time during the construction of the solar project. During the construction period, employees would work up to a 12-hour daytime shift with a maximum of 50 employees on site at night. Nighttime work hours would occur between sunset and sunrise (generally between 7:00 PM and 7:00 AM). Nighttime activities would be restricted to minor non-ground disturbing work, interior use of O&M facility, emergency work, and work required for special-status species mitigation.

Employees would travel from the expected primary workforce areas of Hollister/San Benito County and Fresno County which are between 10 and 60 miles from the site. Employees are expected to carpool at a rate equivalent to 1.2 employees per vehicle. The project would generate the most auto traffic, 448 trips, from 6:00–7:00 AM during the arrival of employees for the daytime work shift and 7:00–8:00 PM during the departure of employees of the daytime work shift.

For material deliveries, a maximum of 100 large trucks would access the site on a daily basis. Trucks carrying oversized loads would access the site infrequently. Materials and equipment would generally be delivered from within a 100-mile radius. Trucks would generally arrive at the site evenly distributed between the hours of 6:00 AM and 6:00 PM. Therefore there would be up to 200 daily truck trips, with a maximum of 18 truck trips occurring during any one hour between 6:00 AM to 6:00 PM. Table C.14-3 shows daily trips anticipated for the Project in the 2010 Final EIR and the daily trips anticipated for the Revised Project.

Table C.14-3. Estimated Daily Traffic, 2010 Final EIR Proposed Project and 2014 Revised Project

| Trip Types | 2010 Final EIR | Revised Project Peak | Revised Project Average |
|---------------------------|----------------|----------------------|-------------------------|
| Employees | 200 | 550 | 320 |
| Employee Daily Trips | 268 | 950 | 580 |
| Assumed Vehicle Occupancy | 1.5 | 1.2 | 1.2 |
| Material Deliveries | 30 | 200 | 60 |
| Total Daily Trips | 298 | 1,150 | 620 |

Construction Traffic Specifications. Table C.14-4 (Construction Traffic Specifications, 2010 Final EIR Proposed Project and 2014 Revised Project) shows a comparison of construction traffic specifications for the Project as evaluated in the 2010 Final EIR and the Revised Project. As described in the 2010 Final EIR, material deliveries would be on-going throughout construction; much of the heavy construction equipment would arrive to the site early and stay for the duration of construction.

Table C.14-4. Construction Traffic Specifications, 2010 Final EIR Proposed Project and 2014 Revised Project

| Traffic Type | 2010 Final EIR Total One-Way Trips | Revised Project Total One-Way Trips | 2010 Final EIR Average Daily One-Way Trips | Revised Project Average Daily One-Way Trips | Trip Types: On-site Local = 40 miles or less Remote = > 40 miles |
|----------------------------|------------------------------------|-------------------------------------|--|---|---|
| Aggregate base material | 1,320 | 10,000 | 4 | 15 | Local |
| Backhaul excess cut | 1,320 | 1,320 | 4 | 4 | On-site |
| Water trucks, dust control | 66,000 | 50,000 | 40 | 100 | On-site |
| Concrete raw material | 1,980 | 1,980 | 6 | 5 | Local |
| PV panel delivery | 8,250 | 2,250 | 5 | 20 | Remote |
| Substation equipment | 1,200 | 1,200 | 5 | 5 | Remote |
| Electrical materials | 3,300 | 3,300 | 2 | 15 | Remote |
| Total | 83,370 | 70,050 | 66 | 164 | N/A |

Project Site Access. All project traffic would access the project site via either Panoche Road or Little Panoche Road. This traffic analysis assumes that 60 percent of the employees would come from San Benito County and use Panoche Road from SR 25, and the remaining 40 percent would use Little Panoche Road from Interstate 5. All heavy truck traffic would be restricted to the use of Little Panoche Road from Interstate 5. No truck traffic would use Panoche Road from SR 25 or the unpaved section of Panoche Road/Jackass Grade.

Road Closures. Construction of the project substation may require temporary closure or partial closure of roadways around the project site.

Roadway Traffic Operations. The traffic volume data collected along Panoche and Little Panoche Roads showed volumes that were well below capacities of each of the roadways. The Project traffic on each of the study roadways and intersections is presented in Table 6 of Appendix 2 (2014 Traffic Study).

Intersection Operations Analysis.³ Level of service calculations were performed for those intersections identified to be of critical importance. The key intersections analyzed are: (1) SR 25 and Panoche Road and (2) Little Panoche Road and Panoche Road. Both intersections are two-way stop controlled unsignalized intersections. Unsignalized intersection levels of service are evaluated on the basis of worst-case delay for each stop-controlled approach at the intersection. All intersections within the

³ *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The intersections were analyzed using TRAFFIX software, which is based on the *Highway Capacity Manual (HCM) 2000* method for computing level of service at intersections. TRAFFIX is a commonly used software program to calculate intersection delay and is available to the public.

County are required to meet the County's LOS standard of LOS C. Results of the level of service analysis indicate that both study intersections currently operate at LOS A conditions⁴ during the AM, PM, and mid-day peak hours (see Table 8 in Appendix 2). Based on the proposed start and end times of the daytime work shift, the project would not generate auto trips during the standard AM and PM peak hours because workers would be arriving before the normal morning peak hours and leaving after normal afternoon peak hours.

Impact TR-1: Construction would create unsafe conditions on public roadways (Class II)

The primary County roads that would be used to access the Project site, Panoche Road and Little Panoche Road, were discussed in detail in the 2010 Final EIR. Based on the analysis in the 2010 Final EIR, because of safety hazards, mitigation measures require that Panoche Road east of State Road 25 would be restricted to Project use by private vehicles and would not be used by trucks delivering materials or equipment to the Project site. Requirements related to this restricted use are in previously adopted Mitigation Measure TR-1.1 (Prepare and implement Traffic Control Plan). In accordance with the Traffic Control Plan, signage and flagging would be implemented along each segment of Little Panoche Road that is narrower than 18 feet. The Traffic Control Plan required by previously adopted Mitigation Measure TR-1.1 also requires the Applicant to identify measures to ensure safe transport of all trucks to the project site.

Heavy trucks, such as 18 wheel semi-trailers, produce disproportionate wear and tear on the roadway system. Total construction truck trips would be reduced from 83,370 one-way trips (over a 5 year construction period) in the 2010 Final EIR to 70,050 for the Revised Project. Overall impacts to the roadway system would be similar to those of the Approved Project, but the impacts would occur over a shorter period of time. An updated traffic index assessment⁵ was conducted to determine the required pavement structure for truck trips from the Revised Project. Since the additional truck traffic would only occur over an approximately 18-month construction period, the 10-year design period recommended by Caltrans was utilized for the analysis.

The traffic assessment presented in SEIR Appendix 2 indicates that Little Panoche Road currently serves relatively low existing traffic volumes. The additional truck trips associated with the Project would require potentially more frequent road rehabilitation during the approximately 18 month duration of construction activities. Following construction, roadways would be repaired to meet the current traffic-serving capacity, as stated in the Approved Project, for a design life of 10 years. The addition of project traffic to the remaining roadways would not change the required traffic index since passenger cars and smaller trucks have a negligible effect on pavement service life.

Because portions of Little Panoche Road may not be adequate to sustain heavy truck travel, and because the addition of project traffic would hasten the deterioration of this roadway, previously adopted Mitigation Measures TR-1.2 (Rehabilitate and monitor roadway pavement) and TR-1.3 (Repair roadway damage) are necessary to ensure the safety of public roadways.

The Revised Project would generate substantially more daily (and hourly) traffic over its shorter construction period. Table C.14-3 shows daily trips. The 2010 Final EIR assumed a peak of 298 daily vehicle trips; the Revised Project would generate a peak of 1,150 daily trips and an average of 580 daily

⁴ LOS A means free-flow conditions with little or no delay.

⁵ The traffic index is a measure of the number of Equivalent Single Axle Loads (ESAL) expected in a design lane over the design period.

trips. In addition, the 2010 Final EIR Project assumed that construction personnel would work in three shifts, which would have spread out trips through several arrival and departure times. In the 2010 Final EIR, the maximum number of hourly vehicle trips was 67. Because most construction personnel for the Revised Project would be arriving and departing at approximately the same time, the Revised Project would generate the greatest amount of auto traffic, 448 trips, from 6:00 – 7:00 AM during the arrival of employees for the daytime work shift and 7:00 – 8:00 PM during the departure of employees of the daytime work shift. Based upon existing traffic count data, the identified peak of project traffic would not coincide with the peak of existing traffic along surrounding roadways.

The effects of Revised Project traffic on the Project area roadways and critical intersections was analyzed based on projected roadway volume increases, intersection levels of service analysis and assessment of whether traffic signals should be required at primary intersections. Since truck trips do not have the same effect on the transportation network as auto trips, the estimated project truck traffic was increased using a heavy vehicle adjustment factor of 1.5 to yield passenger-vehicle equivalent trips (a truck trip is considered to represent 1.5 passenger-vehicle trips) for the analysis of project conditions. The project is expected to add 1,150 daily trips to the roadways and result in daily traffic volumes along the roadways ranging from 152 to 892 daily vehicles.

The increase in daily construction traffic due to the condensed project schedule has the potential to impede emergency response vehicle access to the Panoche Valley. In addition, the large number of vehicles on the small local roads during project commuting timeframes could present a risk of increased frequency of accidents for workers and the public and place additional burden on emergency response agencies. Mitigation Measure TR-1.4 is a new measure, proposed to ensure that potential impacts from Revised Project traffic do not create new significant impacts related to traffic safety. Mitigation Measure TR-1.4 requires the Applicant to develop a Traffic Safety Plan that ensures (a) the ability of emergency service providers to access the Panoche Valley region during project construction, and (b) the safety of the public and project traffic using regional roads during peak project traffic conditions. The Traffic Safety Plan would be developed based on coordination with the County Building and Planning Department, the San Benito and Fresno County Sheriffs' Offices, and the California Highway Patrol.

Though the project traffic would result in an increase in traffic along each of the roadways, the increase would still be within roadway capacities. However, because the substantial increase in daily and hourly vehicle traffic may increase the likelihood of vehicle collisions (as seen during construction of other similar solar projects in remote areas), Mitigation Measure, MM TR-1.4 (Ensure Traffic Safety) is proposed as shown in Section C.14.3.2 below.

With the implementation of Mitigation Measures TR-1.1, TR-1.2, and TR-1.3 from the 2010 Final EIR and implementation of the newly proposed Mitigation Measure TR-1.4, the impacts of the Revised Project would be less than significant (Class II).

Impact TR-2: Project implementation would increase congestion and travel delays on regional and local roadways or exceed an established level of service standard (Class II)

Traffic volume data collected in 2010 along Panoche and Little Panoche Roads showed volumes of existing traffic that were well below capacities of each roadway (see Table C.14-1). The Revised Project would add 1,150 one-way vehicle trips to the existing traffic on these roads. Although the addition of project traffic would result in an increase in traffic along each of these roadways, such an increase would have little effect on roadway operations and the total volume of traffic on Panoche would remain within the roadway capacities. In addition, under the Revised Project work schedule, employees would

generally be coming to and from the Project site during non-peak times when few other vehicles are using these roadways.

In addition to evaluating traffic volume of area roads, level of service was analyzed for two key intersections: (1) SR-25 and Panoche Road; and (2) Little Panoche Road and Panoche Road. The results indicate that both study intersections currently operate and are projected to continue to operate at LOS A conditions during the AM, PM, and mid-day peak hours under existing conditions. Based on the proposed start and end times of the daytime work shift for the Revised Project, the Project would not generate auto trips during the standard AM and PM peak hours.

However, it should be noted that the Revised Project would result in a substantial increase in auto trips during the early morning (before the standard commute period) and late evening hours (after the standard commute period). Intersection level of service policies and significance criteria are typically only applicable to standard weekday commute periods when ambient traffic volumes are greatest. Mitigation Measure TR-1.1 would reduce impacts related to Project traffic to less than significant levels through implementation of a County approved Traffic Control Plan and Mitigation Measure TR-1.4 would reduce traffic related safety impacts through implementation of a Traffic Safety Plan.

As with the Approved Project, the Revised Project may require short-term road closures of Little Panoche Road that could disrupt traffic flow and could lead to congestion. To ensure that any temporary construction-related lane closures would not result in significant impacts related to congestion, the Traffic Control Plan required under Mitigation Measure TR-1.1 would be implemented. The Traffic Control Plan would identify the location and length of time of roadways closures. Mitigation Measure TR-1.4 (Ensure Traffic Safety) would require implementation of a Traffic Safety Plan that includes provisions for ensuring that any potential delays are less than 30 minutes. The Traffic Control Plan also requires that oversize trucks requiring pilot cars travel along Little Panoche Road only between 9:00 AM and 4:00 PM.

Because of the low volume of existing traffic on roadways that would be utilized by Project-related traffic and the traffic controls required by Mitigation Measure TR-1.1 and the newly proposed Mitigation Measure TR-1.4, impacts related to traffic congestion would be less than significant (Class II).

C.14.3.4 Changes to Adopted Project Mitigation Measures

Three mitigation measures adopted in 2010 are not shown in this section because they are unchanged since their adoption; they are presented for reference only in Appendix 3. One new mitigation measure is proposed to be added for the Revised Project: Mitigation Measure TR-1.4 (Ensure traffic safety). The substantial increase in daily construction traffic that would result from the Revised Project's 18 month construction schedule has the potential to impede emergency response vehicle access to the Panoche Valley. In addition, the large number of vehicles on the small area road during project commuting timeframes could present a risk of increased frequency of accidents for workers and the public and place additional burden on emergency response agencies. Mitigation Measure TR-1.4 is a new measure (shown underlined), proposed to ensure that potential additional impacts from Revised Project traffic are not significant impacts. This measure would result in less than significant impacts (Class II).

TR-1.4 **Ensure Traffic Safety.** The Applicant shall develop a Traffic Safety Plan that ensures (a) the ability of emergency service providers to access the Panoche Valley region during project construction, and (b) the safety of the public and project traffic using regional roads during peak project traffic conditions. The Applicant shall develop a Traffic Safety

Plan based on coordination with the County Building and Planning Department and the Sheriff's Office, incorporating one or more of the following requirements:

- The Applicant shall prepare a detailed plan to ensure emergency vehicle access to the project area during construction, specifically addressing the timeframes with heaviest traffic on Highway 25, Panoche Road, and Little Panoche Road;
- The Applicant shall provide funding for up to two additional Sheriff or CHP units to patrol Panoche Road, Little Panoche Road, and Highway 25, as determined necessary, between 6 a.m. and 8 p.m. on weekdays through the entire construction duration. The precise number, location, and timing of additional patrols shall be coordinated with the County Sheriff and CHP and the County to adequately address all defined potential safety impacts;
- The Applicant shall consider staggered work hours for construction employees, so the construction workforce traffic would start and finish each workday in at least 2 separate groups, separated by at least one hour, rather than requiring all workers to start work at the same hour;
- The Applicant shall limit construction truck delivery hours for trucks on Little Panoche Road, Panoche Road, and Highway 25 to avoid normal commuting timeframes (after 9 a.m. and before 4 p.m.), and prohibit truck deliveries on weekends, except by prior approval from the County.
- The Applicant shall provide quarterly documentation to the County documenting use of shuttle buses and carpools, in compliance with its APM AQ-2, in which the Applicant has committed to providing incentives for workers to use project-sponsored shuttle bus service or carpooling. Such documentation shall be provided within 30 days of the end of each calendar quarter. If either traffic conditions or traffic incidents show impacts of concern to the County or Sheriff's Office, additional carpooling or shuttles shall be implemented to reduce vehicles on the public roads.
- The Applicant shall require each construction worker to attend a project-specific driving safety awareness program developed by the Applicant, prior to starting work on the project. The program shall specifically define work hours, existing speed limits, road conditions presenting safety concerns, and approach to allowing emergency vehicles to access the project area.
- The Applicant shall inform the County about each traffic incident involving project vehicles or near-miss accidents within 24 hours of its occurrence or as soon as possible, and include a recommendation for how each accident could have been avoided. This information shall be used to develop Adaptive Strategies to improve safety during the construction process, as required by the County.
- The Applicant shall provide to each worker a map of designated parking and waiting areas for informal carpooling. Designated parking and waiting areas shall not increase the likelihood of vehicle collisions and shall not block or delay other traffic or established parking for other purposes. Designated locations for informal carpooling shall be posted at work sites and included in worker training materials.
- The Applicant and contractors shall endeavor to ensure that traffic delays related to Project construction shall not exceed 30 minutes. When road closures and traffic delays more than 30 minutes are anticipated, the Applicant shall ensure that signs are

posted at work sites and public locations at least one week in advance warning workers and the public to anticipate delays. This information shall also be available on a Project website and on signs visible from SR 25 and I-5.

C.14.3.5 PG&E Upgrades Impacts

Two transportation and circulation impacts are addressed in this section; cumulative impacts are evaluated in Section C.14.3.6.

Impact TR-1: Construction would create unsafe conditions on public roadways (Class III)

PG&E upgrades would require minimal personnel and very limited material and equipment deliveries. Work areas for PG&E upgrades would be accessed from existing roads, including Panoche Road east of Little Panoche Road. PG&E's OPGW installation along the 17-mile segment would be completed in approximately 12-16 weeks, and at any one location the construction would take from 2 to 3 weeks. Helicopters would be used to transport electrical workers to the towers, deliver materials, and assist in pulling the OPGW from tower to tower. As part of the telecommunications upgrade work, PG&E would install approximately 9 wood poles along its existing ROW where the 230 kV line crosses under an existing 500 kV transmission line. PG&E would also construct 8 new tubular steel poles (TSPs) to tie the existing transmission line into the new PG&E switchyard located within the Revised Project boundaries. Approximately 12-20 construction personnel would be utilized during an approximate 12-16 week period for installation of the OPGW. Using a maximum of 90 work days in the 16-week period, there would be approximately 3,600 trips during construction of the OPGW.

Construction work for microwave towers is described in Section B.11.2.1 of the Project Description. Construction of new towers would take approximately 2-6 months at each site and would utilize existing access roads. No road closures are anticipated; however, if any temporary road closures are required, a Traffic Control Plan would be implemented. The traffic control measures implemented by PG&E would be consistent with those published in the California Joint Utility Traffic Control Manual (California Inter-Utility Coordinating committee 2010). These measures would facilitate the safe movement of materials and traffic during construction. Locations along anticipated construction routes requiring special accommodation would be identified during final engineering. Additionally, if needed, PG&E would obtain permits from the local jurisdiction and Caltrans. The risk of unsafe conditions on public roadways would be reduced through implementation of a Traffic Control Plan pursuant to the California Joint Utility Traffic Control Manual as stated in AMM TR-1 (Develop and implement traffic control plan). The full text of this Avoidance & Minimization Measure is presented in Table B-12 (Section B.11). This impact would be less than significant (Class III).

Impact TR-2: Project implementation would increase congestion and travel delays on regional and local roadways or exceed an established level of service standard (Class III)

Because of the low volume of existing traffic on area roads, the limited work involved, and the short duration of construction activities, with the implementation of a Traffic Control Plan, as defined in AMM TR-1 (Develop and implement traffic control plan), this impact would be less than significant (Class III).

C.14.3.6 Cumulative Impacts

With mitigation, construction of the Revised Project and the PG&E Upgrades would result in less than significant impacts to transportation. The worst-case trip generation for the solar project would be approximately 1,150 peak trips. The traffic generated during construction activities for the Revised Project

would occur for a short period of time (approximately 18 months) and would be dispersed throughout different portions of the project route. Operation and maintenance traffic to and from the Revised Project would be very similar to existing conditions and is not expected to conflict with applicable congestion management programs. Other developments addressed in Section D, updated cumulative projects list, may generate traffic during construction or operation, but are not located in areas where the project roads would be directly affected. Other projects listed in Section D would obtain approvals from relevant agencies, which would likely require mitigation measures related to transportation and traffic impacts, if necessary. Therefore the contribution of the Revised Project and the PG&E Upgrades to cumulative impacts would not be cumulatively considerable and would be less than significant (Class III).

C.14.4 Summary of Impacts

The significance of impacts for transportation and circulation for the Revised Project and for the PG&E Upgrades is summarized in Sections C.14.4.1 and C.14.4.2. Section C.14.4.3 summarizes the impacts of all project components.

C.14.4.1 Revised Solar Project

There are no changes to the significance of impacts from the conclusions of the Final EIR. The impacts summarized in Table C.14-1 remain accurate. However, one mitigation measure has been added in response to the more intense traffic that would result from the Revised Project's construction schedule. The Revised Project would result in less than significant impacts to transportation and circulation. Impact TR-1 (Construction would create unsafe conditions on public roadways) and Impact TR-2 (Project implementation would increase congestion and travel delays on regional and local roadways or exceed an established level of service standard) would be less than significant with implementation of the mitigation measures (Class II).

C.14.4.2 PG&E Upgrades

The proposed PG&E upgrades would take place over 12-16 weeks. As recommended in AMM TR-1, PG&E would be required to use signage and flaggers as appropriate in order to minimize potential traffic delays. The PG&E upgrades would result in less than significant impacts to transportation and circulation. Impact TR-1 (Construction would create unsafe conditions on public roadways) and Impact TR-2 (Project implementation would increase congestion and travel delays on regional and local roadways or exceed an established level of service standard) would be less than significant (Class III).

C.14.4.3 Overall Significance of Impacts

The overall impacts of the solar project and the PG&E upgrades would be less than significant with implementation of mitigation and AMMs (Class II). All solar project impacts to transportation and circulation would be less than significant with implementation of mitigation (Class II). All impacts of the PG&E Upgrades related to transportation and circulation would be less than significant (Class III). Cumulative impacts related to transportation and circulation would be less than significant (Class III).

C.14.5 References

Caltrans (California Department of Transportation). 2008a. All Traffic Volumes on California State Highways. Traffic Volumes for I-5. Accessed April 30, 2010.

- Caltrans. 2008b. California Department of Transportation. All Traffic Volumes on California State Highways. Traffic Volumes for SR-25. Accessed April 30, 2010.
- Caltrans. 2005. Transportation Concept Report for Interstate 5. July.
- Caltrans. 2003. Transportation Concept Report for State Route 25. November 13.
- Caltrans. 2002. Guide for the Preparation of Traffic Impact Studies. December.
- Fresno County. 2014. Fresno County General Plan Policy Document. 2000 General Plan Review, Revised Public Review Draft. September 2014. <http://www.co.fresno.ca.us/ViewDocument.aspx?id=60071> Accessed November 2014.
- Hexagon (Hexagon Transportation Consultants, Inc.). 2010. Panoche Solar Farm Traffic Study. 21. May 19.
- Hexagon. 2014. Panoche Solar Farm Traffic Study. Prepared for Aspen Environmental Group. November 13.
- Power (Power Engineers). 2010. Solargen Roadway Analysis. April 13.