

3.13. TRANSPORTATION/TRAFFIC

3.13.1. ENVIRONMENTAL SETTING

Westlands Solar Park

The WSP plan area is located entirely within the unincorporated area of Kings County. The plan area is located generally south of State Route (SR)-198, west of SR-41, and east of the Fresno County line. The roadway network providing access to the WSP plan area is described below.

Major Highways

State highways in the vicinity that serve the plan area include SR-198 located 2 miles north, SR-41 located 0.5 to 3 miles east, SR-43 located 17 miles northeast, SR-269 located 5 miles west, and Interstate 5 located 8 miles southwest (see Figure TR-1). All State highways in the vicinity that provide regional access to the WSP plan area currently operate at acceptable levels of service (i.e., LOS B or C). Levels of Service range from “A” to “F” with “A” representing the highest level of service and “F” representing the lowest and unacceptable level of service. (See Section 3.13.3. *Environmental Impact Analysis* for definitions of Levels of Service.)

Local Roads

The Kings County roads serving the WSP plan area include: Avenal Cutoff Road, which bisects the plan area from northeast to southwest, and provides connection to SR-198 to the northeast and I-5 to the southwest; 25th Avenue, which connects Avenal Cutoff Road to SR-198 to the north; Laurel Avenue, which serves the northeast portion of the plan area and connects Avenal Cutoff Road to SR-41 to the east; and Nevada Avenue, which serves the south-central portion of the plan area and connects Avenal Cutoff Road to SR-41 to the east. All Kings County roads serving the WSP plan area currently operate at acceptable LOS B or C.

The Fresno County roads serving the plan area include: Gale Avenue, which connects Avenal Cutoff Road to SR-269 to the west; and Jayne Avenue, which is the westward extension of Nevada Avenue in Fresno County and connects Avenal Cutoff Road to SR-269 and I-5 to the west. All Fresno County roads providing access to the WSP plan area currently operate at acceptable LOS B or C.

Airports

The public use airports that are nearest to the WSP plan area include: Hanford Municipal (16 miles northeast), Coalinga Municipal (15 miles west), and Harris Ranch Airport (15 miles northwest). The airfield at Naval Air Station Lemoore (NASL) is located 5.5 miles north of the project site. There are 6 private airstrips within a 5-mile radius of the site, two of which are located in proximity to the plan area (at Shannon Ranch and Stone Land Company Ranch).

Public Transit

The Kings Area Rural Transit (KART) operates two bus routes in the WSP vicinity. These include the Hanford to Avenal Route, which follows SR-41 to the east of WSP, and the Hanford to NAS Lemoore Route, which follows SR-198 to the north of WSP.

Non-Motorized Transportation

The nearest existing bikeway runs along the Avenal Cutoff Road through the WSP plan area, and extends from SR-198 in the north to Avenal the south. The Regional Bike Routes plan in the *2035 Kings County General Plan Circulation Element* shows a planned bikeway along Nevada Avenue between Avenal Cutoff Road and SR-41 within the WSP plan area (KC 2010d).

WSP Gen-Tie Corridors

The WSP Gen-Tie Corridors extend for a total distance of 23.0 miles, most of which is located in the unincorporated area of Fresno County, with relatively short segments of both the north and south gen-ties extending east into Kings County. The main roadways in the vicinity of the WSP Gen-Tie Corridors are described below and shown in Figure 7 in Chapter 2. *Project Description*.

Major Highways

The primary State highway in the vicinity is SR-269, which is crossed by both gen-tie corridors on their approach to the Gates Substation. Other State highways in the vicinity that provide regional access to the gen-tie corridors include I-5, SR-198, and SR-41, all of which currently operate at acceptable levels of service (i.e., LOS B or C)(Fresno COG 2014, Kings Co 2010d). (See Section 3.13.3. *Environmental Impact Analysis* for definitions of Levels of Service.)

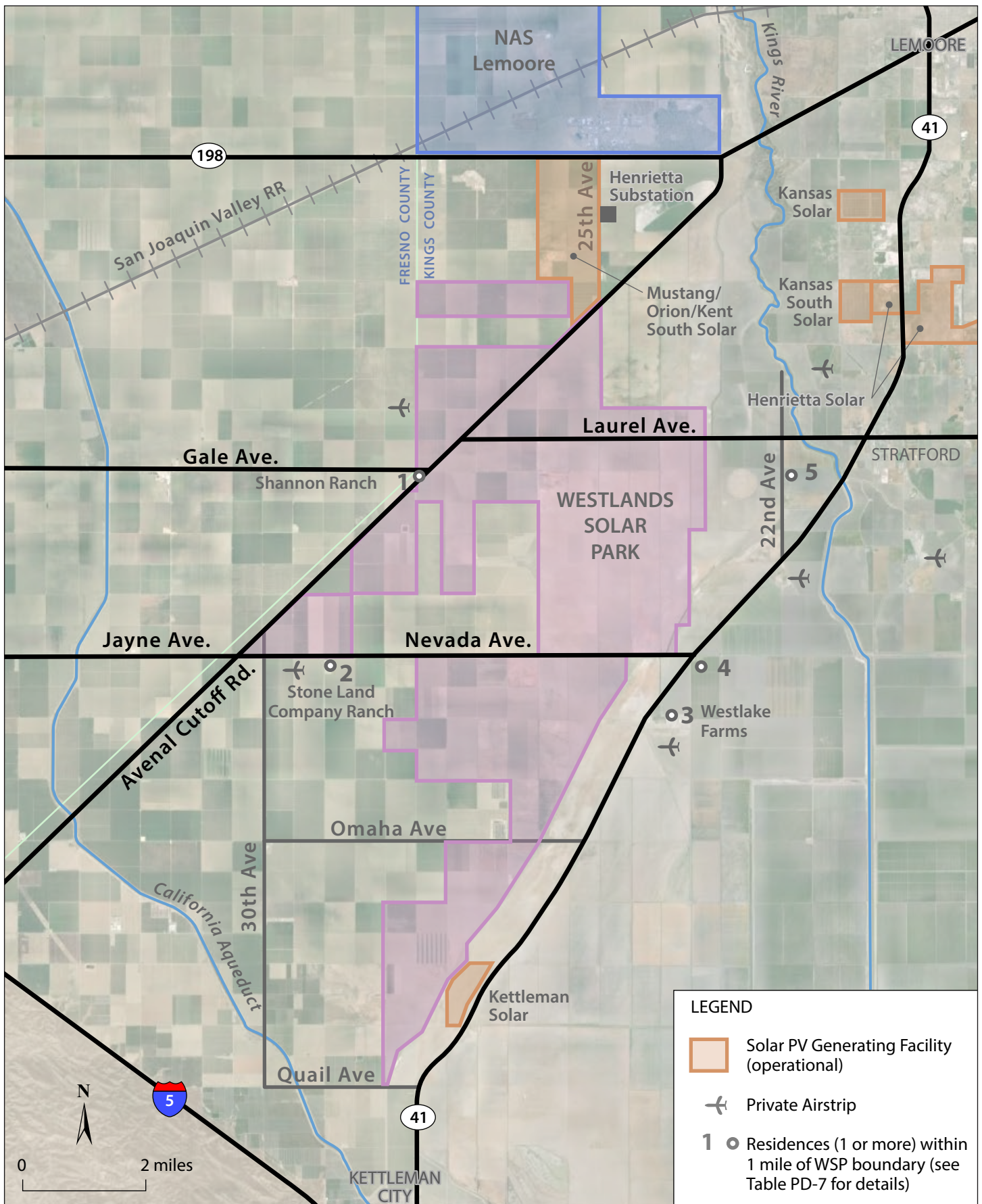
Local Roads

The main Kings County roads in the vicinity of the gen-tie corridors include Avenal Cutoff Road and Nevada Avenue, which currently operate at acceptable LOS C and LOS B, respectively (Kings County 2010d).

The main Fresno County roads in the vicinity of the gen-tie corridors include Gale Avenue and Jayne Avenue, which operate at LOS A and LOS B, respectively (Fresno COG 2014).

Airports

The nearest municipal airports to the WSP Gen-Tie Corridors include the Hanford and Coalinga, which are located between 6 and 20 miles from the transmission corridors at their nearest points. The only other public use airport is the Harris Ranch Airport, which is located 10 miles northwest of the WSP Gen-Tie Corridors at SR-198 and I-5. The airfield at Naval Air Station Lemoore (NASL) is located 5.0 miles north of the northern gen-tie corridor. There are a total of 5 private airstrips within 7 miles of the WSP Gen-Tie Corridors, two of which are located adjacent to the WSP plan area (at Shannon Ranch and Stone Land Company Ranch), with the remaining 3 located to the east of the WSP plan area in Kings County.



Base map: Google Earth, 2016

WSP Vicinity - Roadways
Figure TR-1

This page intentionally left blank

Public Transit

The Kings Area Rural Transit (KART) operates two bus routes in the WSP Gen-Tie Corridors vicinity. These include the Hanford to Avenal Route, which follows SR-41 to the east of WSP, and the Hanford to NAS Lemoore Route, which follows SR-198 to the north of WSP. The Fresno County Rural Transit Agency (FCRTA) operates the Coalinga-Avenal-Huron route in the vicinity of the western ends of the WSP Gen-Tie Corridors.

Non-Motorized Transportation

In Kings County, there is an existing bike route along Avenal Cutoff Road that extends from SR-198 to I-5, and a planned bike route along Nevada Avenue between SR-41 and Avenal Cutoff Road (Kings County 2010d). In Fresno County, there are existing and planned bikeways along Jayne Avenue, SR-269, and the San Joaquin Railroad right-of-way in the vicinity of the Westlands Transmission Corridors (Fresno County 2000b).

3.13.2. REGULATORY CONTEXT

State

California Vehicle Code

Various sections of the California Vehicle Code (CVC) apply to the WSP solar facilities and Westlands transmission corridors. CVC Section 35550 imposes weight guidelines and restrictions upon vehicles traveling on State freeways and highways, and requires heavy haulers to obtain permits from Caltrans prior to delivery of any heavy haul load. CVC Section 35780 requires that haulers of oversized or excessive loads over State highways obtain a “Single-Trip Transportation Permit” from Caltrans prior to delivery of any oversized load. Oversize/overweight permits are considered on a case-by-case basis but may include requirements such as California Highway Patrol escort, special speed limits, and other restrictions. The CVC also contains various regulations governing the transportation of hazardous materials on State highways.

California Streets and Highways Code

Section 117 of the California Streets and Highways Code requires that permits be obtained from Caltrans for placement within the State right-of-way of any structures or fixtures such as utility poles, pipes, ditches, drains, sewers, or other above-ground or underground structures. Other sections of the Streets and Highways Code require the issuance of encroachment permits for work within the rights-of-way of State or county roadways.

Kings County

Kings County Regional Transportation Plan

The 2014 Kings County Regional Transportation Plan (RTP), prepared by the Kings County Association of Governments (KCAAG), contains goals and objectives for State highways, major local routes of significance, alternative transportation modes, and strategies for transportation and demand management (KCAAG

2014). Since KCAG is a metropolitan planning organization, and not a Transportation Management Agency (TMA), it is not required to adopt Transportation Systems Management (TSM) measures or a Congestion Management Plan (CMP) as is required for larger urbanized areas.

Kings County General Plan

The 2035 Kings County General Plan contains the following goals, objectives and policies related to transportation facilities which are relevant to the Westlands Solar Park.

Circulation Element

A. Countywide Circulation

- | | |
|------------------|---|
| C GOAL C1 | <i>Provide a coordinated countywide circulation system with a variety of safe and efficient transportation alternatives and modes that interconnect cities, community districts, adult education facilities, and adjoining cities in neighboring counties, and meets the growing needs of residents, visitors and businesses.</i> |
| C OBJECTIVE C1.3 | <i>Maintain an adequate Level of Service operation for County roadways and ensure proper maintenance occurs along critical routes for emergency response vehicles.</i> |
| C Policy C1.3.1: | Maintain and manage County roadway systems to maintain a minimum Level of Service Standard “D” or better on all major roadways and arterial intersections. |
| C Policy C1.3.2: | Require proposed developments that have the potential to generate 100 peak hour trips or more to conduct a traffic impact study that follows the most recent methodology outlined in Caltrans Guide to the Preparation of Traffic Impact Studies. |
| C Policy C1.3.5: | Require new development to pay its fair share of costs for street and traffic improvements based on traffic generated and its impact to traffic levels of service. |
| C Policy C1.3.6: | Require dedication of right of way to county standards for all new development projects. |
| C Policy C1.3.7: | Require new development to respect existing precise plan lines or ultimate right of way lines dedication of right of way as a condition of development approval. |
| C OBJECTIVE C1.3 | <i>Promote Public Transit and vanpooling within the County urbanized areas to increase ridership and decrease traffic demand on County roadways.</i> |

- C Policy C1.3.3: Encourage and support the enhancement and marketing of transit and vanpool services as a viable transportation alternative and transportation control measure to improve air quality.

Kings County Improvement Standards

The Kings County Improvement Standards serves as an engineering reference for Kings County staff and private parties in the design and construction of improvements for public works projects and private development improvements. The standards include engineering design specifications for the construction of streets, water supply systems, storm drainage, and sewage disposal.

Fresno County

Fresno County General Plan

The Fresno County General Plan contains the following goals and policies related to transportation facilities which are relevant to the Westlands Solar Park and Westlands Transmission Corridors.

Circulation Element

A. Streets and Highways

Goal TR-A *To plan and provide a unified, coordinated, and cost-efficient countywide street and highway system that ensures the safe, orderly, and efficient movement of people and goods.*

Policy TR-A.2 The County shall plan and design its roadway system in a manner that strives to meet Level of Service (LOS) D on urban roadways within the spheres of influence of the cities of Fresno and Clovis and LOS C on all other roadways in the county.

*

*

In no case should the County plan for worse than LOS D on rural County roadways, worse than LOS E on urban roadways within the spheres of influence of the cities of Fresno and Clovis, or in cooperation with Caltrans and the Council of Fresno County Governments, plan for worse than LOS E on State highways in the county.

Fresno County Regional Transportation Plan

The Fresno County 2014 Regional Transportation Plan (RTP), prepared by the Fresno Council of Governments (Fresno COG), contains goals and objectives for State highways, major local routes of significance, planning and financing of roadway improvements, alternative transportation modes, and strategies for transportation and demand management within Fresno County. The RTP also includes the Sustainable Communities Strategy and Congestion Management Process (CMP) for Fresno County (Fresno COG 2014).

Fresno County Congestion Management Process

The Fresno COG's 2009 Congestion Management Process is intended to provide for the regional management of traffic congestion through integrated multi-modal transportation system planning and management that is integrated with the land use planning process to reduce regional vehicle miles traveled and improve regional air quality. The CMP process monitors traffic conditions on the Regionally Significant Road System, consisting of state highways and major county roads, and applies locally adopted Level of Service standards as the performance measures for the transportation system (Fresno COG 2014).

3.13.3. ENVIRONMENTAL IMPACT ANALYSIS

SIGNIFICANCE CRITERIA

Based on the State CEQA Guidelines, Appendix G, the WSP solar development and the transmission projects would be considered to result in a significant transportation/traffic impact if they would:

- a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? (Impacts TR-1 and TR-6)
- b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the congestion management agency for designated roads or highways? (Impact TR-2)
- c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (Impact TR-3)
- d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (Impact TR-4)
- e. Result in inadequate emergency access? (Impact TR-5)
- f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? (Impact TR-6)

Level of Service Standards

As discussed in Section 3.13.2. *Regulatory Context*, the primary measure of performance effectiveness by the applicable affected counties and Caltrans is the Level of Service standard. Levels of Service range from "A" to "F", with "A" representing free flow and "F" being heavily congested. The traffic conditions associated with each service level are described in the following table.

Level of Service Descriptions – Roadways

Level of Service (LOS)	Traffic Flow Characteristics
A	Traffic flows freely with little or no restrictions on maneuverability. No delays.
B	Traffic flows freely, but drivers have slightly less freedom to maneuver. No delays.
C	Density becomes noticeable with ability to maneuver limited by other vehicles. Minimal delays.
D	Speed and ability to maneuver is severely restricted by increasing density of vehicles. Minimal delays.
E	Unstable traffic flow. Speeds vary greatly and are unpredictable. Minimal delays.
F	Traffic flow is unstable, with brief periods of movement followed by forced stops. Significant delays.

Source: Caltrans 2010.

The California Department of Transportation (Caltrans) endeavors to maintain a target LOS at the transition between LOS C and LOS D, while lower LOS is accepted in areas of existing congestion, such as urban highways segments (Caltrans 2002). Kings, Fresno, and Merced counties have established LOS D as the minimum acceptable level of service on their roadways (Kings County 2010d; Fresno COG 2014; MCAG 2014). The traffic generated by WSP solar development would conflict with an established measure of effectiveness if it resulted in a degradation of Level of Service to lower than LOS C on a State Highway, or lower than LOS D on a County Road.

IMPACTS AND MITIGATION

Impact TR-1. Conflict with Transportation Plan or Level of Service Policy

Westlands Solar Park. The WSP solar facilities would increase traffic during construction and operation; however, the traffic volumes would not result in exceedance of applicable policies establishing acceptable levels of service or measures of effectiveness. (*Less-than-Significant Impact*)

WSP Gen-Tie Corridors. The WSP Gen-Tie projects would increase traffic during construction and operation; however, the traffic volumes would not result in exceedance of applicable levels of service standards or measures of effectiveness. (*Less-than-Significant Impact*)

This impact analysis addresses significance criterion ‘a’ above.

Westlands Solar Park

For State highways and County roads, the relevant measure of effectiveness for performance is the Level of Service (LOS) standard. The California Department of Transportation (Caltrans) endeavors to maintain a target LOS at the transition between LOS C and LOS D, while lower LOS is accepted in areas of existing congestion, such as urban highways segments (Caltrans 2002). Both Kings County and Fresno County have established LOS D as the minimum acceptable level of service on their roadways (Kings County

2010d; Fresno COG 2014). The traffic generated by WSP solar development would conflict with an established measure of effectiveness if it resulted in a degradation of Level of Service to lower than LOS C on a State Highway, or lower than LOS D on a County Road.

Scope of Traffic Evaluation

This program-level evaluation is intended to provide general overview of potential traffic impacts commensurate with the level of detail currently available on the Westlands Solar Park. Since WSP solar projects have not yet been defined, this evaluation does not address potential traffic impacts associated with specific solar projects within Westlands Solar Park. Each individual WSP solar project will be subject to a project-specific traffic impact analysis to be prepared in conjunction with the project-specific environmental review required at the time of subsequent Conditional Use Permit review by Kings County. The purpose of this analysis is to evaluate the overall traffic impacts associated with the development of the Westlands Solar Park as a whole. This evaluation is based on worst-case assumptions regarding scale and pacing of WSP buildout, and the calculations are confined to daily traffic volumes on affected roadway segments. While this evaluation is based on a hypothetical scenario (described below), it has value at a programmatic level since it provides an indication of the general level of traffic impacts that can be expected on the roadway network under worst-case conditions during WSP buildout. A more specific evaluation, involving a fine grained analysis of peak hour level of service impacts at intersections, would not be appropriate or meaningful since the analytical results would be based on hypothetical scenario and thus would be too speculative to be of value for defining project-specific impacts or mitigation measures.

Traffic evaluations were performed on two scenarios, one reflecting near-term conditions during the early stages of WSP development, and the other reflecting far-term conditions in the latter stages of WSP buildout. The results of these evaluations are presented below.

Near-Term Conditions

As is typical of all PV solar development, the PV solar projects constructed within the Westlands Solar Park would generate substantially greater volumes of traffic during construction than during project operations. During construction, substantial numbers of workers would be onsite during site preparation, grading, panel installation, and electrical equipment installation. The construction period is also when the greatest number of truck deliveries would be made, including deliveries of grading and construction equipment, solar panels, racking systems, electrical equipment, gravel, asphalt, and concrete, among other materials.

Under near-term conditions, it is assumed that no SGFs are operational, so all traffic is generated by construction activity. A screening level of analysis was conducted to determine if adverse impacts to roadway system performance would occur, even under temporary conditions during project construction. Since the schedule for development of individual WSP solar projects through 2030 has not been determined, this analysis assumes reasonable worst-case project conditions regarding sequencing and size of solar projects as the basis of the traffic evaluation. For purposes of this evaluation, it was assumed that two solar projects with generating capacities of 250 MW each would be completed in consecutive years. As described in *Chapter 2. Project Description*, it is expected that a 250 MW solar facility would be the largest SGF constructed within WSP. The pace of construction of solar projects can vary widely depending on contract obligations and other factors. The construction of a 250 MW SGF could take as long as 3 years, or the schedule could be expedited for completion in 18 months or less.

For purposes of this analysis, a construction period of 2 years was assumed. It is further assumed that two solar projects of 250 MW would be completed in consecutive years, which would require overlapping construction schedules. Under this scenario, the first SGF would begin construction at the beginning of year 1 and be completed at the end of year 2; while the second SGF would start construction at the beginning of year 2 and be completed at the end of year 3, such that both SGFs would be under construction throughout year 2. The construction schedule for a typical 250-MW solar facility is shown in Table PD-2 in Chapter 2. *Project Description*. With overlapping construction schedules, Phases 2 and 3 of project 1 would overlap with each other and with Phase 1 of project 2 for a period of 4 months in the middle of year 2. This period represents the peak level of construction activity that is expected to occur at any time during buildout of Westlands Solar Park. [Note: Although one of the two WSP switching stations (if needed) could also start construction at the beginning of year 1, it would be completed before the end of year 1, so no portion of its construction schedule would occur in the middle of year 2 when the peak SGF construction occurs under this scenario.]

The estimated number of construction workers and off-site vehicles and equipment used for each construction phase for a 250 MW project are also shown in Table PD-2. As indicated in the table, approximately 470 workers are expected to commute to and from the construction sites during this peak construction period, resulting in a total of 940 daily trips (inbound and outbound). For purposes of analysis, it was assumed that no workers would carpool, although some carpooling is anticipated under actual conditions.

During brief periods, construction activity would intensify and result in traffic volumes up to 1.5 times the average. However, such days are expected to be unusual, and the potential for such peak days to occur simultaneously at all three overlapping construction phases would be very small. Since such a scenario would occur rarely, if at all, it is not suitable for analysis of reasonable worst-case traffic impacts.

Project worker commute traffic was distributed to the roadway system in accordance with a gravity model that considered time and distance factors relative to regional population centers to determine directional trip assignments. The average daily truck deliveries were estimated for the peak construction period (i.e., 48 deliveries) and were similarly distributed according to place of origination for each type of delivery. In order to reflect the effect of trucks on highway capacity, all truck trips were multiplied by 1.5 to derive Passenger Car Equivalent (PCE) trips generated by trucks, per Caltrans guidance. Deliveries were also multiplied by two to reflect inbound and outbound trips. Thus the average daily PCE truck trips were calculated to total 144 trips, bringing the total peak traffic generation to 1,084 daily trips when worker trips (above) are added. In addition, the two 250-MW solar projects were assumed to be located adjacent to each other, so their combined traffic effects on any particular roadway segment would not be diluted by distance separation. The assumed location of the adjacent projects is in the eastern portion of the WSP plan area, generally between Laurel Avenue on the north and Nevada Avenue on the south. These are shown in Figure PD-3 (in Chapter 2. *Project Description*) as SGFs 2 and 3.

TABLE TR-1
NEAR-TERM TRAFFIC CONDITIONS – WSP CONSTRUCTION
(BASED ON TWO 250 MW SGFs WITH OVERLAPPING CONSTRUCTION)

Roadway Segment ¹	Near-Term Conditions				Next LOS Transition (AADT/LOS) ⁶	Avg. Daily Trips ⁷	LOS with Project	LOS Impact Threshold ⁸ (Impact?)
	AADT ²		Roadway Lanes (Agency) ⁴	LOS ⁵				
	Existing	Baseline ³ (2018)						
<u>Avenal Cutoff Road</u>								
- b/n SR-198 & Nevada/Jane	5,150 ⁶	5,359	2 (KC)	C	13,800/D	433	C	D/E (No)
- b/n Nevada/Jane & SR-269/I-5	3,000 ⁶	3,122	2 (KC)	B	4,200/C	85	B	D/E (No)
<u>Laurel Avenue</u>								
- b/n Avenal Cutoff & SR-41	910 ⁶	947	2 (KC)	B	4,200/C	775	B	D/E (No)
<u>Lincoln/Gale Avenues</u>								
- b/n Avenal Cutoff & SR-269	1,680 ⁹	1,748	2 (FC)	B	4,200/C	56	B	D/E (No)
<u>SR-198</u>								
- b/n Avenal Cutoff & SR-41	18,000 ⁹	18,545	4 (fwy)(CT)	B	39,600/C	236	B	C/D (No)
- b/n SR-41 & 18 th Ave.	20,000 ⁸	20,606	4 (fwy)(CT)	B	39,600/C	244	B	C/D (No)
<u>SR-41</u>								
- b/n SR-198 & Bush St.	16,500 ⁹	17,000	4 (fwy)(CT)	B	39,600/C	435	B	C/D (No)
- b/n SR-198 & Jackson Ave.	12,500 ⁹	12,879	2 (CT)	C	13,800/D	444	C	C/D (No)
- b/n Jackson & Nevada Aves.	9,000 ⁹	9,273	2 (CT)	C	13,800/D	518	C	C/D (No)
- b/n Nevada & Bernard Aves.	6,900 ⁹	7,109	2 (CT)	C	13,800/D	43	C	C/D (No)
- b/n Bernard Ave. & I-5	20,000 ⁹	20,812	4 (CT)	B	29,300/C	43	B	C/D (No)
<u>Nevada/Jayne Avenues</u>								
- b/n SR-41 & Avenal Cutoff	390 ⁶	406	2 (KC)	B	4,200/B	292	B	D/E (No)
- b/n Avenal Cutoff & SR-269	2,890 ¹⁰	3,007	2 (FC)	B	4,200/B	267	B	D/E (No)
- b/n SR-269 & I-5	3,450 ¹⁰	3,590	2 (FC)	B	4,200/C	251	B	D/E (No)
- b/n I-5 & SR-33	5,820 ¹⁰	6,365	2 (FC)	C	13,800/D	251	C	D/E (No)

¹ Includes only roadway segments with >50 project-generated ADT (i.e., >25 round trips per day).

² AADT = Annual Average Daily Trips (= existing traffic volumes on roadways and highways).

³ Existing AADT was increased by 1% per year from count year to Baseline Year (2018).

⁴ Agency abbreviations: KC = Kings County; CT = Caltrans; FC = Fresno County.

⁵ Sources: Kings County 2010d; Caltrans 2002; Fresno COG 2013.

⁶ Source: Kings County 2010d. [Note: Overall traffic volumes did not increase between 2006 and 2014; see text for discussion.]

⁷ Project Daily Trips: Average Day = Average daily trips generated during the peak construction period.

⁸ Minimum LOS Standards by Agency: Kings County = LOS D; Caltrans = LOS C; Fresno County = LOS D.

⁹ Source: Caltrans 2011, 2016.

¹⁰ Source: Fresno COG 2013 (reflects 2011 and 2012 counts).

Table TR-1 shows the effect of project construction traffic on the surrounding roadway network. Table TR-1 includes only those roadway segments that would be subject to 50 or more daily project-generated trips (or 25 round trips per day). All other roadway segments would receive fewer than 50 daily trips from construction traffic under the assumed conditions.

In Table TR-1, the existing condition is represented by the latest year for which traffic count data is available for each of the study roadway segments. These latest count dates range from 2009 to 2015. For Kings County, existing traffic on Kings County roads is from 2006 count data, the most recent available. Caltrans data on statewide traffic volume trends indicates that overall traffic volumes in 2014 were approximately the same as 2006 traffic volumes, reflecting no appreciable change in overall volumes statewide over that 8-year period (Caltrans 2012, 2015). It is assumed that local conditions reflect these statewide trends, such that the Kings County data from 2006 can be considered a reasonable representation of 2014 conditions.

In order to establish Baseline traffic conditions on the study roadways for 2018, the existing count data for each roadway segment was increased by 1 percent per year from its latest count date. This growth rate is somewhat higher than the statewide increase in traffic volumes on State highways (i.e., average annual increase of 0.6 percent over the 10 year period from 2005 and 2015).

As shown in Table TR-1, none of the affected roadway segments would be subject to an LOS impact, or even a change in Level of Service, as a result of WSP solar development in the near-term. The most heavily affected roadways, Laurel Avenue and Nevada Avenue within the WSP plan area, would be temporarily subject to increases of 82 percent and 72 percent of daily traffic volumes, respectively, during the brief four-month period of peak construction activity under the reasonable worst-case scenario; however, the LOS on those roadways would remain well within acceptable LOS B under these traffic conditions. Both of these roadway segments would experience relatively large increases in traffic volumes due to their locations adjacent to the WSP solar projects under the near-term traffic scenario. All other roadways would be subject to temporary traffic increases ranging from less than 1 percent to 9 percent. None of the affected roadway segments would be subject to a change in LOS or a significant LOS impact under near-term conditions. Therefore, it is concluded that solar development within WSP would result a *less-than-significant* impact on the operational effectiveness of the affected roadways during the buildout of the Westlands Solar Park.

Far-Term Conditions

To determine the potential traffic impacts of WSP solar development under far-term conditions, the traffic evaluation considered a 2030 scenario where the WSP would be almost built-out, and most SGFs would be operational, but the final SGF would still be under construction. To represent reasonable worst-case conditions, it was assumed that almost the entire 2,000 MW of solar development would be operational, and that the final 250 MW would still be under construction. Specifically, it was assumed that there would be two adjacent 250 MW solar projects with overlapping construction schedules, as described for near-term conditions above, and that peak construction activity would occur over a 4 month period in mid-2030. The operational traffic inputs are based on the average worker trips and daily deliveries described in Chapter 2. *Project Description*, and the construction inputs are the same as presented above for the near-term analysis.

The baseline for the 2030 traffic scenario is based on future traffic projections for the affected roadways in Kings and Fresno counties. The baseline 2030 traffic volumes for Kings County roadways are from the Kings County General Plan Circulation Element. Although the Circulation Element uses 2035 as the horizon year, these volumes are considered a valid representation, albeit a conservative one, for 2030. Similarly, 2030 volumes for Fresno County roadways were based on the Fresno County Regional Transportation Plan (RTP) which uses 2040 as a horizon year. Therefore, the baseline volumes shown for Fresno County roadways also represent the upper bound of expected baseline volumes for 2030, which likely would actually be significantly lower. The results of the far-term evaluation are shown in Table TR-2 on the next page.

As shown in Table TR-2, none of the affected roadway segments would be subject to an LOS impact, or even a change in Level of Service, as a result of WSP solar development in the far-term. The most heavily affected roadways, Laurel Avenue and Nevada Avenue within the WSP plan area, would be temporarily subject to increases of 81 percent and 41 percent of daily traffic volumes, respectively, during the period of combined peak construction activity under the worst-case scenario; however, the LOS on those roadways would remain well within acceptable LOS B under these traffic conditions. Both of these roadway segments would experience relatively large increases in traffic volumes due to their locations adjacent to the WSP solar projects that would be under construction. All other roadways would be subject to temporary traffic increases ranging from less than 1 percent to 5 percent. None of the affected roadway segments would be subject to a change in LOS or a significant LOS impact under far-term conditions. Therefore, WSP solar development would result a *less-than-significant* impact on the operational effectiveness of the affected roadways under temporary far-term conditions with combined peak construction activities and fully operational SGFs under WSP near-buildout conditions.

Post-Construction Far-Term Traffic

Once the WSP construction is completed and all solar facilities are fully operational, the traffic volumes generated at WSP would become very light. As described in Chapter 2, *Project Description*, an average of 10 workers would travel to a typical 250-MW SGF on any given workday during a typical year. This translates to an overall average of about 80 workers throughout the WSP on any given workday, generating 160 daily trips in total. Specifically, up to 3 personnel would visit each SGF daily to perform inspections, maintenance and repairs, and crews of up to 20 personnel would occasionally be present to perform larger repair and equipment replacement tasks. Panel washing crews with about 25 workers would be on each SGF for about 8 weeks per year, and up to 3 sheep herders would be on each site during the spring to manage sheep grazing. There would also be an average of about 10 daily truck deliveries for replacement parts and other materials. Throughout the WSP, there would be a total of about 80 truck deliveries, or 160 daily truck trips in total. This would be the equivalent to 240 passenger vehicle trips (i.e., each truck trip is equivalent to 1.5 passenger vehicle trips). In total, the fully operational SGFs would generate about 400 daily trips (i.e., 160 worker trips and 240 PCE truck trips). The most affected roadways, Laurel Avenue and Nevada Avenue within the WSP plan area, would be subject to increases of 12 percent and 5 percent of daily traffic volumes, respectively. These roadway segments would still operate at LOS B after all WSP solar facilities are fully operational. Traffic volumes on Avenal Cutoff Road through the project area would increase by 1.5 percent at WSP buildout, but the service level would remain at LOS C, well within acceptable range. All other roads would be subject to a less than 1 percent increase in daily traffic volumes, and no roadway segments would be subject to a change in LOS or an LOS impacts as a result of full WSP operations. Overall, the very low volume of traffic generated during WSP operations would have a negligible effect on the performance of the surrounding

3. Environmental Setting, Impacts, and Mitigation Measures
3.13. Transportation/Traffic

roadway system. Therefore, the traffic impact of SGF operations after WSP buildout would be *less than significant*.

TABLE TR-2
FAR-TERM (2030) TRAFFIC CONDITIONS – WSP CONSTRUCTION + OPERATIONS
(BASED ON TWO 250 MW SGFs WITH OVERLAPPING CONSTRUCTION + FULL WSP OPERATION)

Roadway Segment ¹	2030 Baseline Conditions			Next LOS Transition (AADT/LOS) ⁵	Average Daily Trip Generation			LOS with Project	LOS Impact Threshold ⁷ (Impact?)
	AADT ²	Roadway Lanes (Agency) ³	LOS ⁴		Construction Trips	Operational Trips	Total Trips		
<u>Avenal Cutoff Road</u>									
- b/n SR-198 & Nevada/Jane	10,770 ⁵	2 (KC)	C	13,800/D	433	80	513	C	D/E (No)
- b/n Nevada/Jane & I-5	10,770	2 (KC)	C	13,800/D	85	19	104	C	D/E (No)
<u>Laurel Avenue</u>									
- b/n Avenal Cutoff & SR-41	1,030 ⁵	2 (KC)	B	4,200/C	775	55	830	B	D/E (No)
<u>Lincoln/Gale Avenues</u>									
- b/n Avenal Cutoff & SR-269	3,360	2 (FC)	B	4,200/C	56	6	62	B	D/E (No)
<u>SR-198</u>									
- b/n Avenal Cutoff & SR-41	43,990 ⁵	4 (fwy)(CT)	C	55,200/D	236	42	278	C	C/D (No)
- b/n SR-41 & 18 th Ave.	54,820 ⁵	4(fwy)(CT)	C	55,200/D	244	29	273	C	C/D (No)
<u>SR-41</u>									
- b/n SR-198 & Bush St.	43,840 ⁵	4 (fwy)(CT)	C	55,200/D	435	75	510	C	C/D (No)
- b/n SR-198 & Jackson Ave.	19,340 ⁵	4 (CT) ⁹	B	29,300/C	444	66	510	B	C/D (No)
- b/n Jackson & Nevada Aves.	13,370 ⁵	4 (CT) ⁹	B	29,300/C	518	25	543	B	C/D (No)
- b/n Nevada & Bernard Aves.	13,260 ⁵	4 (CT) ⁹	B	29,300/C	43	27	70	B	C/D (No)
- b/n Bernard Ave. & I-5	13,940 ⁵	4 (CT) ⁹	B	29,300/C	43	27	70	B	C/D (No)
<u>Jayne/Nevada Avenues</u>									
- b/n SR-41 & Avenal Cutoff	880 ⁵	2 (KC)	A/B	4,200/B	292	72	364	B	D/E (No)
- b/n Avenal Cutoff & SR-269	5,780 ⁸	2 (FC)	C	13,800/D	267	16	283	C	D/E (No)
- b/n SR-269 & I-5	7,220 ⁸	2 (FC)	C	13,800/D	251	16	267	C	D/E (No)
- b/n I-5 & SR-33	10,560 ⁸	2 (FC)	C	13,800/D	251	3	254	D	D/E (No)

¹ Includes only roadway segments with >50 project-generated ADT (i.e., >25 round trips per day).

² AADT = Annual Average Daily Trips (= traffic volumes on roadways and highways).

³ Agency abbreviations: KC = Kings County; CT = Caltrans; FC = Fresno County.

⁴ Sources: Kings County 2010d; Caltrans 2002; Fresno COG 2013.

⁵ Source: Kings County 2010d.

⁶ Project Daily Trips: Average Day = Average daily trips generated during the peak construction period.

⁷ Minimum LOS Standards by Agency: Kings County = LOS D; Caltrans = LOS C; Fresno County = LOS D.

⁸ Source: Fresno COG 2013. (No COG data is available for 2030; AADT for 2030 estimated by doubling 2014 volumes, roughly in line with agency projections for other road segments.)

⁹ Source: Caltrans 2013.

Decommissioning Traffic

As discussed in Chapter 2. *Project Description*, the level of activity during project decommissioning (or deconstruction) is expected to be similar to the activity level during project construction. Thus the number transport vehicle trips required for off-haul of decommissioned materials is expected to be similar to the number of trips required to haul the materials to each SGF site during construction. The number of workers required on-site is also expected to be about the same, while the use of construction equipment would be similar or a little less. For purposes of analysis, it is assumed that traffic generated during decommissioning would be the same as the traffic generated during construction, as shown in Table TR-1 above. As shown in the table, project-generated traffic volumes would be very low relative to current traffic volumes on the affected roadways, and measures of performance would not be adversely affected by the project construction traffic. Upon decommissioning of each SGF after 25 years of operation, the long-term traffic forecasts for the affected roadways indicate that all roadways would be operating at acceptable service levels (Kings County 2010d, Fresno COG 2014). The temporary addition of relatively small volumes of traffic from SGF decommissioning is not expected to have a significant impact upon service levels on the affected roadways.

In summary, WSP solar development would not conflict with any applicable measure of performance effectiveness established by any transportation agency with jurisdiction over roadways affected by project-generated traffic. Therefore, the impact would be *less than significant*.

WSP Gen-Tie Corridors

During construction of the gen-tie projects, the work activities would be distributed along the gen-tie corridors, with various crews engaged in surveying, ROW clearing, access driveway construction, staging area preparation, tower foundation installation, tower assembly and erection, conductor installation, guard structure installation and removal, and site restoration. The construction of the transmission lines would involve truck trips for hauling equipment and materials to and from the construction sites, and also commute trips by construction workers.

Deliveries of tower steel, hardware, conductor spools, concrete, and equipment would occur throughout the construction period. The equipment and material deliveries would originate in various locations in northern and southern California, and concrete would be delivered from ready-mix plants in the Coalinga and Los Banos areas. Thus truck deliveries would come from I-5 in the west for regional access and then follow local highways and roads to reach the work sites along the transmission corridors.

The peak period of truck deliveries would occur during installation of foundations and structures for the transmission towers. Concrete would be delivered to tower sites by concrete mixer trucks for use in construction of the tower footings. As mentioned, it is expected that concrete would be supplied from an existing ready-mix plant located near Coalinga. It is estimated that up to 100 CY of concrete would be required at each tower location, for either monopoles or lattice towers. (Although monopoles would involve only one footing, the footing would be substantially wider and deeper than each of the four footings for a typical lattice tower, so the amount of concrete required would be similar for each tower type.) Given a concrete mixer truck capacity of 10 CY, and conservatively assuming that the footings for each tower would typically be completed in one day, a total of 10 concrete deliveries would occur at each tower site over the course of one day. Deliveries of tower steel and other materials for tower installation would involve approximately 22 round trips by trucks per day. The combined truck deliveries of concrete, steel, and other tower materials would total approximately 32 round trips per day (or 64 trip ends) at any

given tower site. Since installation of tower foundations and tower construction represent the peak of construction activities at any given site along the transmission corridor, these 64 one-way trips represent the peak daily truck traffic generation for transmission project construction. These truck trips would occur throughout the day, with only a small portion (i.e., 10 percent) occurring during the AM and PM peak-hour periods (i.e., up to 7 peak truck trips in the AM and 7 peak-hour truck trips in the PM). For purposes of evaluating traffic impacts, trucks trips are converted to Passenger Car Equivalents (PCEs), and each heavy truck trip is defined as 3 PCEs. Thus for purposes of analysis, the peak truck trip generation would be 21 PCE trips.

Construction workers would generate traffic in commuting to and from the work sites. Most construction workers are expected to reside in urban centers in the region, which are largely concentrated along the State Route 99 corridor to the east of the gen-tie corridors. The construction activity with the largest concentration of workers would be tower assembly and erection which typically involves a 22-person crew. Assuming that these workers would all commute solo, the peak traffic generated by construction personnel would be 22 peak-hour trips in the AM and 22 peak-hour trips in the PM.

The peak period for truck trips and worker commute trips is expected to overlap somewhat at each tower work site. The combination of peak-hour truck trips (i.e., 21 PCE trips) plus construction worker commute trips (i.e., 22 peak-hour trips) would result in a total of 43 peak-hour trips at any given tower work site. These trips would be widely distributed throughout the roadway network. As mentioned, most truck trips would be from I-5 in the west, while most construction workers would commute from population centers to the east. Thus the truck delivery routes and commute routes would tend to not overlap, except near the access points to the construction sites. During the peak hours, the effects on roadways and intersections nearest to the peak activity sites would be minor, with temporary increases in traffic volumes averaging less than one trip per minute.

At other construction work sites along the gen-tie corridors, the concentration of truck deliveries and construction worker activity would be lower than activity levels at tower work sites, with correspondingly lower traffic generation. While there may be some additive traffic generation effects at some roadway segments and intersections, these effects would be minor given the generally dispersed nature of the construction work sites, the relatively low intensity of the construction work, and the short duration of construction activity at any given site.

The primary impact associated with gen-tie line construction would be from slow moving construction trucks and the larger turning radii of the trucks compared to passenger vehicles. This may result in intermittent reductions in roadway capacity, but these effects would be temporary and would not result in a significant impact to the roadway service levels. Depending on conditions, restrictions may be placed on heavy truck and oversized vehicle deliveries during the AM and PM peak-hour commute periods. In addition, local transportation agencies may restrict truck traffic to specific haul routes. Whether such restrictions are adopted would be determined during the engineering design stage and during agency consultations undertaken during the course of project-specific environmental review for the transmission projects. (See Impact TR-4 below for further discussion.)

In summary, given the dispersed nature of transmission line construction, the relatively small number of truck and worker commute trips that would be generated at any given work site, the short duration of construction activity at each work site, and the broad distribution of construction traffic, the construction

of the gen-tie lines would not conflict with any applicable measure of performance effectiveness established by any transportation agency with jurisdiction over roadways affected by project-generated traffic. Therefore, the impact would be *less than significant*.

Mitigation Measures:

Westlands Solar Park. No mitigation is required.

WSP Gen-Tie Corridors. No mitigation is required.

Impact TR-2. Conflict with Congestion Management Program

Westlands Solar Park. The WSP solar projects would not conflict with any standards established by an applicable congestion management agency. (*Less-than-Significant Impact*)

WSP Gen-Tie Corridors. The WSP gen-tie projects would not conflict with any standards established by an applicable congestion management agency. (*Less-than-Significant Impact*)

This impact analysis addresses significance criterion 'b' above.

Westlands Solar Park

Transportation policies and programs in Kings County are established in the Kings County *2035 General Plan Circulation Element* and the Kings County Association of Governments (KCAG) *2014 Regional Transportation Plan (RTP)*. (As noted in Section 3.13.2. *Regulatory Context*, Kings County is not required to prepare a congestion management plan due to the largely rural nature of the county.) The *Circulation Element* establishes Level of Service D as the minimum service level to be maintained on County streets and roadways, and also includes policies promoting public transit and non-motorized transportation alternatives such as walking and bicycling (Kings County 2010d). The objective of the RTP is to maintain and enhance the efficiency of the transportation system through roadway improvements and the promotion of travel demand measures in order to reduce congestion and overall vehicle miles traveled (KCAG 2014).

As mentioned under Impact TR-1 above, the project would generate the highest volumes of traffic during the construction phases. As shown in Tables TR-1 and TR-2 above, the worker trips and truck trips generated during peak periods of construction activity would not result in a reduction of service levels on any of the affected roadways, which would remain at LOS B on most roadways, and LOS C on two roadway segments, under near-term and far-term conditions. Thus all roadways affected by project construction traffic would continue to operate at LOS C or better, thus maintaining the County's LOS standard of D as established in the General Plan Circulation Element.

Since traffic generated by WSP solar projects would affect roadways in Fresno County, the Fresno COG's Congestion Management Process is applicable. The Regionally Significant Roads identified in the Fresno

CMP that would be subject to WSP-generated traffic include Jayne Avenue, SR-198, and SR-269, all of which operate at LOS A or B under current conditions. As shown in Tables TR-1 and TR-2, the WSP-generated traffic would not reduce these levels of service under near-term or far-term conditions. Since the levels of service on the affected roadways would remain above Fresno County's LOS D minimum standard, the WSP solar development would not conflict with the Fresno County CMP.

Since the WSP plan area is located in a rural area, the WSP solar development does not readily lend itself to traffic reduction measures such as carpooling, transit use, or bicycle commuting. Although not assumed for this analysis, it is likely that some workers would choose to carpool. Since the peak period of construction activity would be under one year in duration for any SGF, the associated traffic generation would be temporary. Once the construction of each SGF is complete, the operational traffic from the solar facilities would be very light, generating an average of 10 trips per day for a typical 250 MW facility, and 80 trips per day over the entire plan area upon WSP buildout. This volume of traffic would be negligible and would have no effect on Level of Service on the affected roadways, which would continue to meet the LOS D standard of the affected counties, and the LOS C standard applied by Caltrans to its rural facilities.

In summary, WSP solar development would not conflict with any standards established by an applicable congestion management agency. Therefore, the WSP solar projects would have *no impact* in this regard.

WSP Gen-Tie Corridors

The WSP Gen-Tie Corridors pass through Fresno and Kings counties and the construction of the transmission projects would generate traffic on nearby state highways and regional roads as identified in the applicable Regional Transportation Plans and pertinent Congestion Management Program (only Fresno County has a CMP). The measure of performance effectiveness or level of service standard for both affected counties is LOS D, and the applicable Caltrans LOS standard is LOS C for its rural facilities.

In Kings County, the regional roads in the vicinity of the WSP Gen-Tie Corridors include SR-41, SR-198, and I-5. In Fresno County, the regional roads in the vicinity of the WSP Gen-Tie Corridors include Jayne Avenue, SR-269, I-5, and SR-198. In the vicinity of the WSP Gen-Tie Corridors, all of these roadways currently operate at LOS C or better.

As discussed under Impact TR-1 above, the traffic generated during construction of the gen-tie projects would be very light. This is due to the dispersed nature of gen-tie line construction, the relatively small number of truck and worker commute trips that would be generated at any given work site, the short duration of construction activity at each work site, and the broad distribution of construction traffic. The traffic generated during inspection and maintenance of the completed gen-tie facilities would be negligible. The construction and maintenance of the gen-tie facilities would not result in a reduction of level of service from the current acceptable service levels on all affected roadways. Therefore, the construction and operation of the WSP gen-tie projects would not conflict any standards established by an applicable congestion management agency. Therefore, the WSP gen-tie projects would have *no impact* in this regard.

Mitigation Measures:

Westlands Solar Park. No mitigation is required.

WSP Gen-Tie Corridors. No mitigation is required.

Impact TR-3. Change in Air Traffic Patterns or Levels, or Increase Safety Risks

Westlands Solar Park. The WSP solar projects are not expected to involve any helicopter use during construction and operation, and would not change air traffic patterns, increase air traffic levels, or otherwise result in substantial safety risks related to aviation. (*No Impact*)

WSP Gen-Tie Corridors. The WSP gen-tie projects may make intermittent use of helicopters during construction, and would not change air traffic patterns, increase air traffic levels, or otherwise result in substantial safety risks related to aviation. Hazards to crop dusters would be minimized by routing the gen-tie lines adjacent to existing transmission and roadway corridors. (*Less-than-Significant Impact*)

This impact analysis addresses significance criterion 'c' above.

Westlands Solar Park

The WSP plan area is located at least 15 miles from the nearest public use airports at Hanford, Coalinga, and Harris Ranch. There are 5 airstrips within a 5-mile radius of the plan area, the nearest of which are adjacent to the plan area at Shannon Ranch and Stone Land Company Ranch. The plan area is located 5 miles south of the airfield at Naval Air Station Lemoore (NASL) and is two miles south of the Accident Potential Zone (APZ) mapped for NAS Lemoore. As discussed in Section 3.7. *Hazards and Hazardous Materials*, under Impact HAZ-10, the physical features within the WSP solar facilities would not be high enough to present an aviation hazard to public, military, or private flight operations. While helicopters are sometimes used in transmission project construction and inspection, this is not expected to occur within the WSP plan area given the flat terrain and general accessibility of the SGF sites. Therefore, the WSP solar development would have no effect on air traffic patterns or safety. In summary, WSP solar development is not expected to change air traffic patterns, increase air traffic levels, or otherwise result in substantial aviation safety risks, and thus would have *no impact* in this regard.

WSP Gen-Tie Corridors

The nearest municipal airports to the WSP Gen-Tie Corridors include the Hanford and Coalinga airports, which are located between 6 and 20 miles from the gen-tie corridors at their nearest points. The only other public use airport is the Harris Ranch Airport, which is located 4 miles northwest of the western ends of the gen-tie corridors. There are a total of 5 private airstrips within 7 miles of the WSP Gen-Tie Corridors. All of these airstrips are located in Kings County near the WSP plan area or to the east. As discussed in Section 3.7. *Hazards and Hazardous Materials*, under Impact HAZ-10, the planned transmission towers would not be high enough to present an aviation hazard to public, military, or private flight operations. While helicopters may be used in gen-tie project construction, they would likely only be used to string conductors over the California Aqueduct and perhaps SR-269. These locations are at least 10 miles from the nearest public use airport and 4 miles from the nearest private airstrip. Therefore, the WSP gen-tie projects would have little or no effect on air traffic patterns or safety.

Crop dusting operations would need to take the new gen-tie lines into account, but the northern gen-tie line would be parallel and adjacent to an existing transmission line that the crop dusters would already be aware of. The southern gen-tie line would not run parallel to an existing transmission line but would run along the north side of the Nevada/Jayne Avenue transportation corridor. The potential hazard to crop dusters along this corridor would be minimized by the alignment of the southern gen-tie line along the edges of fields and adjacent to existing county roads. Therefore, the WSP Gen-Tie Corridors would not present a hazard to crop dusting operations in the vicinity.

In summary, the Westlands gen-tie projects are not expected to change air traffic patterns, increase air traffic levels, or otherwise result in substantial aviation safety risks, and thus the impact would be *less than significant*.

Mitigation Measures:

Westlands Solar Park. No mitigation is required.

WSP Gen-Tie Corridors. No mitigation is required.

Impact TR-4. Increased Traffic Hazards

Westlands Solar Park. During construction of WSP solar projects, slow moving trucks and slow turning movements by large equipment and material delivery trucks could pose a traffic safety hazard along the affected roadways. (*Less-than-Significant Impact with Mitigation*)

WSP Gen-Tie Corridors. During construction of the WSP gen-tie projects, slow moving trucks and slow turning movements by large equipment and material delivery trucks could pose a traffic safety hazard along the affected roadways. (*Less-than-Significant Impact with Mitigation*)

This impact analysis addresses significance criterion 'd' above.

Westlands Solar Park

The WSP solar projects would all obtain direct site access from existing Kings County roads such as Avenal Cutoff Road, Laurel Avenue, and Nevada Avenue. The use of these new entrances would result in turning movements in and out of the SGF sites which would increase the potential for interaction with through traffic along the affected County roads. However, these project entrances would be designed in accordance with the *Kings County Improvement Standards*, and would be subject to prior design review and approval by the Kings County Public Works Department. Project egress would be controlled by stop signs, and sight-lines for all entrances would be very good in all directions given the flat terrain, absence of visual obstructions, and linear alignment of the roadways. Thus the potential traffic hazard resulting from the project would be generally negligible, particularly during project operations when the solar facility would generate very little traffic.

As discussed above, the volume of traffic generated by the WSP solar projects would be greatest during the construction and decommissioning phases. This would include regular deliveries of materials and equipment by large trucks. Slow moving trucks could result in temporary congestion near the project entrances, and could pose a safety hazard due to abrupt changes in the speed of traffic flow, or due to slow turning movements across on-coming lanes of traffic. Unless properly managed, the traffic safety hazards due to construction and decommissioning traffic from WSP solar facilities would represent a *potentially significant impact*. With implementation of Mitigation Measure TR-1a below, the impact would be reduced to *less than significant*.

WSP Gen-Tie Corridors

The construction of the gen-tie projects would include new gen-tie line crossings at several county roads and one State highway. The affected county roads include Avenal Cutoff Road and 30th Avenue in Kings County, and Gale Avenue in Fresno County, and the affected State highway is SR-269.

Current Kings County policy would require undergrounding of the gen-tie lines at the crossings of Avenal Cutoff Road and 30th Avenue. This expected to be accomplished through tunneling beneath the roadways and thus would involve minimal traffic disruption.

Both Fresno County and Caltrans would allow overhead crossings at Gale Avenue and SR-269, respectively. Where the overhead crossings are permitted, temporary guard structures would typically be installed. Each guard structure would consist of standard wood poles and a cross beam to form an H-frame. These structures would be placed on both sides of the affected roadway, and may include netting hung between the cross beams to prevent the conductors from falling into traffic. The installation of the guard structures and netting, and the stringing of cable over the roadway could result in temporary delays and traffic congestion as equipment and materials are moved into or across the roadway. In addition, Caltrans and the counties would likely require short-term road closures when lines are strung over State highways or county roads as a condition of their required encroachment permits. For the busiest highways, the conductor crossings may need to be scheduled for nighttime hours when traffic is lightest. Private roads and lanes could also be subject to temporary closures during stringing of overhead lines. In some cases, the California Highway Patrol may be needed to create temporary traffic breaks. In cases where road closures would be longer in duration, temporary traffic detours may be needed to prevent traffic disruption.

Gen-tie line construction would involve the use of slow moving construction vehicles, many of which would have large turning radii. Safety hazards could arise from abrupt changes in traffic flow speeds caused by slow moving vehicles or from large trucks having to cross oncoming traffic lanes to make turns into construction areas.

In summary, the movement of construction vehicles, equipment and materials within and over public roadways could result in traffic disruption and safety hazards to the traveling public. Unless properly managed, safety hazards arising from construction truck traffic would represent a *potentially significant impact*. With implementation of Mitigation Measure TR-1b below, the impact would be reduced to *less than significant*.

Mitigation Measures:

Westlands Solar Park. Implement MM TR 1a.

WSP Gen-Tie Corridors. Implement MM TR-1b.

MM TR-1a

Traffic Safety Measures for WSP Solar Projects

As a condition of project approval, and prior to the issuance of encroachment permits, the project sponsor shall consult with the Kings County Public Works Department prior to initiation of construction and decommissioning activities that may affect area traffic (such as equipment and supply delivery necessitating lane closures, trenching, etc.) and shall implement appropriate traffic controls in accordance with the California Vehicle Code and other state and local requirements to avoid or minimize impacts on traffic. Traffic measures that shall be implemented during construction and decommissioning activities include the following:

- a. Construction traffic shall not block emergency equipment routes.
- b. Construction activities shall be designed to minimize work on, and use of, local streets. As examples, this might include the following:
 - i. Identify designated off-street parking areas for construction-related vehicles throughout the construction and decommissioning periods.
 - ii. Identify approved truck routes for the delivery of all construction-related equipment and materials.
 - iii. Limit the employee arrivals and departures, and the delivery of equipment and materials, to non-peak traffic periods (e.g., avoid unnecessary travel from 7 to 9 AM and 4 to 6 PM).
 - iv. Provide for farm worker vehicle access and safe pedestrian and vehicle access.
 - v. Provide advance warning and appropriate signage whenever road closures or detours are necessary.
- c. Construction shall comply with San Joaquin Valley Air Pollution Control District standards for unpaved roads, which include a requirement to keep vehicle speeds below 15 miles per hour and to have fewer than 150 trips per day per unpaved road.

The details of the traffic safety mitigations will be determined by the County Public Works Department at such time as the activities for which they are required are scheduled and the applicant's construction contractor requests consultation regarding such activities.

MM TR-1b. Traffic Safety Measures for WSP Gen-Tie Projects

Prior to the start of construction activity on a gen-tie project, the project proponent shall prepare and implement a Traffic Management Plan (TMP). The TMP is to include, but not be limited to, the following provisions:

- A description of work hours, designated haul routes, and any timing restrictions on hauling during peak traffic periods.
- A description of traffic control measures such as flagging, warning signs, barricades, cones, and detours, including locations and timing of the measures.
- A description of the process for providing advance notification to property owners who would be affected by private road closures, temporary installation of guard structures, planned nighttime construction, and other construction activities. The notification would specify the timing and nature of the activity affecting each landowner, and would include contact information for designated construction personnel responsible for public coordination.
- A description of emergency services providers in the affected areas, along with provisions for notification of such service providers on the timing, location, and duration of construction activities, especially road closures and detours.

The Traffic Management Plans would be subject to review and approval of the various transportation agencies, including Caltrans and the Counties of Kings and Fresno, as applicable. These reviews would occur during the course of encroachment permit application processes for their respective roadway facilities. The California Highway Patrol and County Sheriff's Departments would also review the TMPs prior to construction.

Impact TR-5. Emergency Access

Westlands Solar Park. The WSP solar projects would include traffic controls during construction, and would be designed to allow full emergency access within each completed SGF, such that WSP solar development would not result in inadequate emergency access. (*Less-than-Significant Impact*)

WSP Gen-Tie Corridors. The WSP gen-tie projects would include traffic controls during construction, and would be designed to allow full emergency access to the completed gen-tie facilities, such that the WSP gen-tie projects would minimize the potential for inadequate emergency access. (*Less-than-Significant Impact*)

This impact analysis addresses significance criterion 'e' above.

Westlands Solar Park

Projects can affect emergency response in two ways. First, projects may impede emergency response by creating obstructions to access. Second, the projects themselves may be designed in a way that results in inadequate emergency access. These are discussed in turn below.

As discussed under Impact TR-4 above, the construction of the WSP solar projects would involve deliveries by large and slow moving trucks that could result in traffic safety hazards. These delivery trucks could also result in localized congestion which could affect the movement of emergency vehicles. It is anticipated that any such delays to emergency vehicles would be addressed through the implementation of the traffic safety plans as specified in Mitigation Measure TR-1a above. As such, the potential for WSP solar projects to result in inadequate emergency access or passage by emergency vehicles through the WSP would be minimized, and the impact would be *less than significant*.

The WSP plan area is well served by a regional roadway network that includes SR-198, SR-41, and SR-269. Every solar generating facility within the WSP plan area will have direct access to one or more existing Kings County roads including Avenal Cutoff Road, Laurel Avenue, and Nevada Avenue. As such, there are no inadequacies with respect to emergency access to the individual SGFs within the WSP plan area.

Within each WSP solar project, there will be at least two facility entrances to an existing county road. These entrances will connect to the internal system of driveways and aisleways to provide adequate emergency access throughout each SGF. All SGFs will be designed and constructed to be in compliance with Kings County requirements for internal vehicular circulation and fire access by heavy emergency equipment. Upon submittal of CUP applications, project plans for each SGF will be reviewed by the appropriate Kings County departments for conformance with all applicable fire-safety code and ordinance requirements for emergency access. Therefore, the WSP solar projects would result in *no impact* with respect to adequacy of emergency access.

WSP Gen-Tie Corridors

As discussed under Impact TR-4 above, the construction of the WSP gen-tie projects would involve the use of large and slow moving trucks and equipment that could result in traffic safety hazards. These trucks could also result in localized congestion which could affect the movement of emergency vehicles. It is anticipated that any such delays to emergency vehicles would be addressed through the implementation of the traffic safety plans as specified in Mitigation Measure TR-1b above. As such, the potential for the Westlands transmission projects to result in inadequate emergency access or passage by emergency vehicles through the area would be minimized, and the impact would be *less than significant*.

The WSP gen-tie corridors vicinity is well served by a regional roadway network that is centered on I-5 and includes several state highways including SR-198, SR-269, and SR-41, along with several major county roads in Kings and Fresno counties. Emergency access to the gen-tie lines from the regional roadway network would be readily obtained through farm lanes and across fields as needed.

In summary, the accessibility of the WSP gen-tie corridors is adequate for emergency response. Therefore, the WSP gen-tie projects would not result in inadequate emergency response, and the impact would be *less than significant*.

Mitigation Measures:

Westlands Solar Park. No mitigation is required.

WSP Gen-Tie Corridors. No mitigation is required.

Impact TR-6. Conflict with Plans or Policies for Public Transit, Bicycle, or Pedestrian Facilities

Westlands Solar Park. The WSP solar development would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (*Less-than-Significant Impact*)

WSP Gen-Tie Corridors. The WSP gen-tie projects would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (*Less-than-Significant Impact*)

This impact analysis addresses significance criterion 'f' above.

Westlands Solar Park

The solar generating facilities within the WSP plan area are not expected to include permanent staff stationed at the SGFs; instead employees would travel to the SGFs on regular basis to perform maintenance, inspection, and repair tasks. As such, the WSP solar projects would not generate increased demand for bicycle, transit, or pedestrian facilities in the area.

The Regional Bike Routes plan in the *2035 Kings County General Plan Circulation Element* shows an existing bikeway on Avenal Cutoff Road through the WSP plan area, and a planned bikeway along Nevada Avenue between Avenal Cutoff Road and SR-41 within the plan area. Some of the WSP solar projects would have entrances on Avenal Cutoff Road and Nevada Avenue, which would increase potential interaction between bicyclists on the roadways and vehicles entering and exiting the SGFs. However, project egress at each SGF would be controlled by stop signs, and sight-lines in all directions would be very good given the flat terrain, the linear character of the roadways, and lack of visual obstructions. During SGF construction, the small increases in traffic congestion and hazard introduced by slow moving vehicles would be addressed through implementation of the traffic safety measures identified in Mitigation Measure TR-1a, which would also be expected to reduce potential traffic hazards to bicyclists. As such, the new SGFs would may result in temporary disruption to bicyclists, but would pose little or no safety hazard to bicyclists or otherwise decrease the performance of the existing or planned bikeways within the WSP plan area. The WSP solar projects would not conflict with any adopted policies, plans, or programs regarding bicycle facilities, or otherwise decrease the performance or safety of bicycle facilities.

There are no existing or planned public transit routes that pass through the WSP plan area. The nearest existing transit routes are the Hanford to Avenal Route, which follows SR-41 to the east of WSP, and the

Hanford to NAS Lemoore Route, which follows SR-198 to the north of WSP. The WSP solar projects would not decrease the performance or safety of these transit routes facilities. There are no existing or planned pedestrian facilities within or near the WSP plan area. The WSP solar projects would not conflict with any adopted policies, plans, or programs regarding transit or pedestrian facilities, or otherwise decrease the performance or safety of transit or bicycle facilities.

In summary, the WSP solar development would result in little or no potential conflicts with transit, bicycle, or pedestrian plans, policies, or programs, or otherwise decrease the performance or safety of such facilities. Therefore, the impact of WSP solar development in this regard would be *less than significant*.

WSP Gen-Tie Corridors

The WSP gen-tie projects would result in no increased demand for non-vehicular transportation facilities, and would introduce no permanent physical elements that would conflict with existing or planned bicycle, transit, or pedestrian facilities.

In Kings County, there is an existing bike route along Nevada Avenue between SR-41 and Avenal Cutoff Road (Kings County 2010d). In Fresno County, there are existing and planned bikeways along Jayne Avenue and SR-269 in the vicinity of the WSP gen-tie corridors (Fresno County 2000b). The WSP gen-tie projects would cross over, or run parallel to, all of the roadways with existing or planned bike paths identified above. During construction of the gen-tie projects, small increases in localized traffic congestion and hazard may be introduced by slow moving vehicles and by gen-tie crossings over these roadways. These potential safety hazards would be addressed through the implementation of the traffic safety measures identified in Mitigation Measure TR-1b, which would also be expected to reduce potential traffic hazards to bicyclists, transit vehicles, and pedestrians during construction. During operation, the gen-tie lines would have no impact on bicycle facilities. There are no existing or planned transit routes, or existing or planned pedestrian facilities, in the vicinity of WSP Gen-Tie Corridors.

In summary, the construction of the WSP gen-tie projects would result in little or no potential conflicts with transit, bicycle, or pedestrian plans, policies, or programs, or otherwise decrease the performance or safety of such facilities. Therefore, the impact of the WSP gen-tie projects in this regard would be *less than significant*.

Mitigation Measures:

Westlands Solar Park. No mitigation is required.

WSP Gen-Tie Corridors. No mitigation is required.

Cumulative Impacts

Impact TR-7. Cumulative Transportation/Traffic Impacts

Westlands Solar Park. The traffic generated by WSP solar projects, along with traffic from other cumulative projects, would combine to result in increased traffic volumes on roadways in the area. *(Less-than-Significant Cumulative Impact)* During construction and decommissioning, traffic safety hazards may be created by construction vehicles on roadways. *(Less-than-Significant Cumulative Impact with Mitigation)*

WSP Gen-Tie Corridors. The traffic generated by WSP gen-tie projects, along with traffic from other cumulative projects, would combine to result in increased traffic volumes on roadways in the area. *(Less-than-Significant Cumulative Impact)* During construction and decommissioning, traffic safety hazards may be created by construction vehicles on roadways. *(Less-than-Significant Cumulative Impact with Mitigation)*

Geographic Scope of Cumulative Traffic Analysis

The construction and operation of the WSP solar facilities would also generate traffic which would increase traffic volumes along roadways serving the WSP solar projects. The project contributions to cumulative traffic would diminish with distance from the plan area, as project traffic would radiate from the site and disperse throughout the surrounding roadway network. Thus WSP-generated traffic would be concentrated on roadways in the immediate vicinity. The cumulative analysis of traffic impacts considers projects that have the potential to contribute traffic to roadways which would also be subject to substantial WSP-generated traffic. These are the same study roadways evaluated under Impact TR-1. The projects in the WSP vicinity that have the potential to generate significant cumulative traffic volumes are described below.

Westlands Solar Park

Near-Term

Under near-term conditions, there are four pending, approved, and completed projects (or groups of projects) in the WSP vicinity that have the potential to generate significant cumulative traffic to roadways that are also most affected by WSP-generated traffic. All four of these projects comprise solar PV developments. These solar projects are listed below and described in Section 2.5. *Completed, Approved and Pending Projects/ Introduction to Cumulative Impact Analysis*. Their locations are shown in Figure PD-9.

- Mustang/Orion/Kent South
- American Kings
- Mustang 2
- Kettleman

As noted previously, two of the cumulative projects have been constructed (Mustang/Orion/Kent South, and Kettleman), and two others (American Kings and Mustang 2) may be under construction at the same

time as solar projects within WSP. Therefore, only the American Kings solar project (125 MW) and the Mustang 2 solar project (150 MW) have the potential to contribute substantial cumulative traffic in the near-term. There are no other pending or approved developments within the general WSP vicinity that have the potential to contribute substantial cumulative traffic volumes to the roadway network utilized by the WSP solar projects during their construction or operational phases. [Note: Although the Westside Solar Project Phases 1 and 2 is also a cumulative project in the vicinity, that project is located within the WSP plan area and therefore is considered part of WSP for purposes of the cumulative analysis.] For purposes of this analysis, it is assumed that peak construction period of the two unconstructed cumulative projects (American Kings and Mustang 2) would occur at the same time as the peak construction period assumed for WSP solar development.

Level of Service Impacts

In general, the combined traffic from project construction and operational activities at the cumulative projects would result in a cumulative traffic impact if the combined traffic volumes from the cumulative projects results in a reduction of level of service at any affected roadway below the LOS level considered acceptable by the applicable agency (i.e., below LOS C for Caltrans facilities and below LOS D for Kings and Fresno county roads).

The American Kings and Mustang 2 solar projects occupy a combined area of 3,384 acres (with a combined generating capacity of about 275 MW) located directly to the northeast and east of the northeast corner of the WSP plan area (see Figure PD-9 in Chapter 2. *Project Description*). For purposes of this worst-case cumulative analysis, it is assumed that the traffic generated by the two nearby SGFs during construction would be the same as for the overlapping construction of the two 250-MW SGFs assumed in the WSP analysis in Impact TR-1 above, and that the distribution of construction traffic on the local roadway network would be the same as for the WSP case. Thus, under this near-term cumulative traffic scenario, the traffic volumes added to the local roadway network by the cumulative projects, including the WSP projects, would be double the traffic volumes for the WSP case alone. The traffic volumes added to the local roadway network under the assumed near-term conditions are shown in Table TR-3, on the next page.

As shown in Table TR-3, the traffic volumes added by the cumulative projects result in no changes to LOS levels on any of the affected roadway segments, which all operate at LOS C or better after the addition of the cumulative traffic. The resulting traffic volumes do not exceed the level of service thresholds for any of the jurisdictional agencies. Therefore, the near-term cumulative traffic impacts due to increased traffic on affected roadways would be *less than significant*.

Other Transportation/Traffic Impacts

Under near-term cumulative conditions, the other potential traffic impacts would correspond to those evaluated for WSP solar development previously in this section. These are discussed below.

In terms of conflicts with applicable congestion management plans, the cumulative traffic volumes would not exceed the applicable levels of service on regional roadways of significance, and therefore the impact would be *less than significant*.

The two other cumulative projects comprise solar development projects that are adjacent to the WSP plan area and therefore are very similar in character as well as in their geographical characteristics. As such, the above analyses for the WSP solar development with respect to aviation hazards and non-motorized

3. Environmental Setting, Impacts, and Mitigation Measures
3.13. Transportation/Traffic

transportation impacts are equally applicable to this cumulative analysis, and the near-term cumulative impacts would be *less than significant*.

**TABLE TR-3
NEAR-TERM CUMULATIVE TRAFFIC CONDITIONS***

Roadway Segment	Baseline Conditions (2018)			Next LOS Transition (AADT/LOS)	WSP Project Avg. Daily Trips (Peak Construction Period)	Cumulative Avg. Daily Trips (Peak Construction Period –incl. Project)	LOS with Cumulative Projects	LOS Impact Threshold (Impact?)
	AADT	Roadway Lanes (Agency)	LOS					
<u>Avenal Cutoff Road</u>								
- b/n SR-198 & Nevada/Jane	5,359	2 (KC)	C	13,800/D	433	866	C	D/E (No)
- b/n Nevada/Jane & SR-269/I-5	3,122	2 (KC)	B	4,200/C	85	170	B	D/E (No)
<u>Laurel Avenue</u>								
- b/n Avenal Cutoff & SR-41	947	2 (KC)	B	4,200/C	775	1550	B	D/E (No)
<u>Lincoln/Gale Avenues</u>								
- b/n Avenal Cutoff & SR-269	1748	2 (FC)	B	4,200/C	56	112	B	D/E (No)
<u>SR-198</u>								
- b/n Avenal Cutoff & SR-41	18,545	4 (fwy)(CT)	B	39,600/C	236	472	B	C/D (No)
- b/n SR-41 & 18 th Ave.	20,606	4 (fwy)(CT)	B	39,600/C	244	488	B	C/D (No)
<u>SR-41</u>								
- b/n SR-198 & Bush St.	17,000	4 (fwy)(CT)	B	39,600/C	435	870	B	C/D (No)
- b/n SR-198 & Jackson Ave.	12,879	2 (CT)	C	13,800/D	444	888	C	C/D (No)
- b/n Jackson & Nevada Aves.	9,273	2 (CT)	C	13,800/D	518	1036	C	C/D (No)
- b/n Nevada & Bernard Aves.	7,109	2 (CT)	C	13,800/D	43	86	C	C/D (No)
- b/n Bernard Ave. & I-5	20,812	4 (CT)	B	29,300/C	43	86	B	C/D (No)
<u>Jayne/Nevada Avenues</u>								
- b/n SR-41 & Avenal Cutoff	406	2 (KC)	B	4,200/B	292	584	B	D/E (No)
- b/n Avenal Cutoff & SR-269	3,130	2 (FC)	B	4,200/B	267	574	B	D/E (No)
- b/n SR-269 & I-5	3,590	2 (FC)	B	4,200/C	251	502	B	D/E (No)
- b/n I-5 & SR-33	6,365	2 (FC)	C	13,800/D	251	502	C	D/E (No)

* Notes:

- 1) Table shows near-term WSP traffic (see Table TR-1) plus traffic from near-term cumulative projects (see text for explanation).
- 2) Operational traffic in the near-term is negligible and is not included in the near-term cumulative traffic scenario.

With respect to traffic hazards, it is expected that the other two cumulative projects would be required to prepare and implement traffic safety plans, similar to the plan required under Mitigation Measure TR-1a above, to manage construction traffic, which would result in a *less than significant* cumulative impact in terms of traffic hazards. With regard to emergency access, it is anticipated that each of the cumulative solar projects would be designed and constructed to facilitate full access for emergency vehicles throughout

their sites, and that any obstruction of emergency vehicle passage on the adjacent roadways would be avoided through implementation of traffic management plans, as discussed above, such that there would be a *less than significant* cumulative impact with respect to emergency access.

In summary, the cumulative near-term transportation and traffic impacts associated with the combined development of the WSP plan area and other pending, approved and completed projects would be *less than significant with mitigation*.

Far Term

The cumulative traffic conditions in the far term would reflect buildout of land uses planned under the 2035 Kings County General Plan and the Fresno County 2000 General Plan. As designated in the Kings County Land Use Map (GP Fig. LU-11), all the lands in the WSP vicinity are planned for agricultural land uses. It is possible that currently unknown or unforeseen development could occur on the agriculturally-designated lands in the WSP vicinity. Such development could consist of solar PV facilities or infrastructure improvement projects such as power transmission lines or transportation capacity enhancing projects. It is also possible, but unlikely, that the peak construction periods of such projects could occur at the same time as nearby solar development within the WSP plan area, resulting in potential temporary increases in cumulative traffic volumes on the transportation network.

Under the worst-case assumption, WSP buildout would occur in 2030, when it is assumed that traffic volumes projected for General Plan buildout would also occur. The hypothetical worst-case condition for WSP traffic generation under far-term conditions, presented in Table TRA-2, assumes that all operational traffic from WSP buildout would be included, in addition to construction traffic generated by peak construction activity from two 250 MW solar facilities within WSP constructed concurrently. It is further assumed that the other currently proposed and approved solar projects in the area would be completed and operational. All future non-solar development projects are assumed to be included in the traffic projections for General Plan buildout.

It is possible that additional solar and other development may be proposed within the life of the Kings County and Fresno County General Plans that is not reflected in the current Land Use Elements; and any such development may generate traffic that is not included in the traffic projections of the respective Circulation Elements. However, the nature and location of such potential development is currently unforeseeable. Any attempt to predict and analyze the potential impacts from currently unknown development patterns would be speculative, and CEQA explicitly requires that EIRs not engage in such speculative analysis (CEQA Guidelines Section 15145).

The far-term traffic condition in 2030 upon WSP buildout (and with two 250-MW SGFs still under construction) is presented in Table TR-2 under Impact TR-1. As shown in the table, the far-term WSP traffic generation under this scenario does not result in a reduction of level of service or an LOS impact on the affected roadway segments. It is anticipated that all currently pending solar PV projects in the WSP vicinity will have been completed and will be operational by 2030. As discussed under Impact TR-1, the traffic generated by operation of solar PV facilities is very light, and would average about 20 round trips per day for a 250 MW facility. On this basis, it is estimated that other operating solar PV projects in the WSP vicinity in 2030 (totaling approximately 500 MW) would generate total of 100 daily trips, on average (i.e., 20 worker commute round trips + 30 truck delivery trips [20 trips X 1.5 for PCE] = 50 round trips X 2 = 100 daily trip ends). This traffic volume would be very small relative to ambient traffic on the

affected roadways, and when added to the worst-case far-term traffic generation from operation and construction of the WSP solar facilities, would not result in LOS impacts under far cumulative conditions.

In summary, the far-term traffic volumes added by the cumulative projects result in no changes to LOS levels on any of the affected roadway segments, which all operate at LOS C or better after the addition of the cumulative traffic. The resulting far-term traffic volumes do not exceed the level of service thresholds for any of the jurisdictional agencies. Therefore, the near-term cumulative traffic impacts due to increased traffic on affected roadways would be *less than significant*.

Other Transportation/Traffic Impacts

Under far-term cumulative conditions, the other potential traffic impacts would correspond to those evaluated for near-term conditions above. These are discussed below.

In terms of conflicts with applicable congestion management plans, the far-term cumulative traffic volumes would not exceed the applicable levels of service on regional roadways of significance, and therefore the impact would be *less than significant*.

The other cumulative projects comprise solar development projects that are adjacent to the WSP plan area and therefore are very similar in character as well as in their geographical characteristics. As such, the above analyses for the WSP solar development with respect to aviation hazards, emergency access, and non-motorized transportation impacts are equally applicable to the far-term cumulative analysis, and the far-term cumulative impacts would be *less than significant*. With respect to traffic hazards, it is expected that other cumulative projects would be required to prepare and implement traffic safety plans, similar to the plan required under Mitigation Measure TR-1a above, to manage construction traffic. This would reduce the far-term cumulative traffic hazard impact to *less than significant*.

In summary, the cumulative far-term transportation and traffic impacts associated with the combined development of the WSP plan area and other pending, approved and completed projects would be *less than significant with mitigation*.

WSP Gen-Tie Corridors

As discussed previously in this section, the traffic generated by transmission projects is very light during project construction and negligible during operation. During construction, the low traffic volumes are due to the dispersed nature of transmission line construction, the relatively small number of truck and worker commute trips that would be generated at any given work site, the short duration of construction activity at each work site, and the broad distribution of construction traffic. During gen-tie operation, the inspection, maintenance and repair tasks would be infrequent and involve a small number of workers and equipment. As such there is virtually no potential for traffic generated by another project to combine with traffic from the WSP gen-tie projects and result in a significant traffic impact. Therefore, this cumulative analysis considers only projects that are planned to locate adjacent to the WSP gen-tie corridors.

Near Term

Under near-term conditions, there are four pending, approved and completed solar projects and two pending transmission projects in the immediate vicinity of the WSP Gen-Tie Corridors. These projects are

listed below and shown in Figure PD-10, and described in Section 2.5. *Completed, Approved, and Pending Projects/Introduction to Cumulative Impact Analysis.*

- Westlands Solar Farm
- PGE Gates Solar
- PGE Huron Solar
- EC&R Solar Project
- Westside Transmission Project (Gates to Dos Amigos/Los Banos Substation)
- Central Valley Power Connect (CVPC)(Gates to Gregg Transmission Project)

It is noted that the first three solar projects listed have been completed and are operational. Given the negligible traffic generated by the operation of these solar projects, these projects would not have a cumulative traffic impact and therefore are not considered further in this cumulative analysis. It is also noted that the CVPC transmission project has been placed on hold and may not move forward. However, for purposes of this analysis, it is considered an active pending project and thus is included in this cumulative analysis.

Traffic LOS Impacts

The planned gen-tie corridors would generate very small traffic volumes during construction and negligible traffic during operation. The EC&R solar project would generate considerable traffic during construction and very little traffic during operation. It is expected that the EC&R project, which is located adjacent to the northern WSP gen-tie corridor, would be constructed in the near-term. Since the northern WSP gen-tie would not be constructed until the latter stages of WSP build-out, it is highly unlikely that EC&R solar project and the northern WSP gen-tie project would be constructed at the same time, and thus would not generate construction traffic at the same time. Although the EC&R solar project and the southern WSP gen-tie project could be constructed at the same time, the nearest distance between the two projects is about a half-mile. Even under worst-cased conditions, construction on the most proximate portions of both projects, at a distance of about one-half mile, would occur very briefly. For the majority of construction activity on both projects, the active construction on the two sites would be miles apart, where the additive effects of the very low volumes of construction traffic from the gen-tie project would be virtually nil.

In the unlikely event that the one or both of the cumulative transmission projects were constructed at the same time as one of the WSP gen-tie projects, it is highly unlikely that a significant level of service impact would occur, even temporarily during construction. This is primarily due to the temporary nature and very low intensity of transmission line construction, resulting in very low traffic generation from each transmission project, and the unlikelihood of one or more transmission project phase or segment being under construction in proximity to one another at any given time. There would be no discernable accumulation of construction traffic from the three transmission projects, even under worst-case conditions. During transmission operation, traffic generation would be negligible and therefore not considerable. Therefore, the cumulative traffic level of service impact associated with the WSP gen-tie projects would be *less than significant*.

Other Transportation/Traffic Impacts

Under near-term cumulative conditions, the other potential traffic impacts would correspond to those evaluated for the WSP Gen-Tie Corridors previously in this section. These are discussed below.

In terms of conflicts with applicable congestion management plans, the cumulative traffic volumes would not exceed the applicable levels of service on regional roadways of significance, and therefore the impact would be *less than significant*.

The two other transmission projects are very similar in character to the WSP gen-tie projects, and the cumulative solar PV projects would be very similar in character to the WSP solar projects. As such, the above analyses for the WSP gen-tie projects and WSP solar development with respect to aviation hazards and non-motorized transportation impacts are equally applicable to this cumulative analysis, and the near-term cumulative impacts would be less than significant. .

With respect to traffic hazards, it is expected that all of the cumulative projects would be required to prepare and implement traffic safety plans to manage construction traffic, similar to the plan required under Mitigation Measure TR-1b above, which would result in a *less than significant* cumulative impact in terms of traffic hazards. With regard to emergency access, it is anticipated that the cumulative solar projects would be designed and constructed to facilitate full access for emergency vehicles throughout their sites, and that any obstruction of emergency vehicle passage on the adjacent roadways would be avoided for all cumulative projects through implementation of traffic management plans, as discussed above, such that there would be a *less than significant* cumulative impact with respect to emergency access.

In summary, the cumulative near-term transportation and traffic impacts associated with the combined development of the WSP gen-tie projects and other pending, approved and completed projects would be *less than significant with mitigation*.

Far Term

Under far-term conditions in 2030, the WSP gen-tie projects and other cumulative projects discussed under near-term conditions above would be completed. The traffic generated by inspection, maintenance, and repair activities associated with gen-tie facility operation would be negligible, as discussed above. The nature and location of future development in the vicinity of the WSP gen-tie corridors in 2030 is unknown. While the General Plans for Kings and Fresno counties indicate a continuation of rural and agricultural development patterns in the vicinity of the gen-tie corridors, there is a potential for solar development or currently unknown new communities or public infrastructure or agricultural processing facilities to be developed nearby. Even so, the traffic generated from operation of the WSP gen-tie lines would be sufficiently low that even under worst-case conditions where development or public infrastructure projects would occur adjacent to the gen-tie corridors, the traffic generated by the gen-tie facilities combined with construction and/or operation of known nearby projects would not result in a substantial cumulative increase in traffic volumes. Therefore, the cumulative traffic level of service impacts associated with the operation of WSP gen-tie lines in the far term would be *less than significant*.

Other Transportation/Traffic Impacts

Under far-term cumulative conditions, it is expected that all of the near-term cumulative transmission and solar projects would be complete and operating. There are no other currently known projects that would be under construction or operational under far-term cumulative conditions. Therefore, this evaluation addresses the cumulative impacts associated with far-term operation of the known near-term cumulative projects.

In terms of conflicts with applicable congestion management plans, the far-term cumulative traffic volumes would not be expected to exceed the applicable levels of service on regional roadways of significance and therefore the impact would be *less than significant*.

Any impacts associated with the cumulative projects regarding aviation hazards, emergency access, and non-motorized transportation are anticipated to not be significant or to be reduced to less than significant levels by mitigation measures implemented during design and construction of the cumulative projects in the near term, and thus the related far-term cumulative impacts would be *less than significant*. With respect to traffic hazards, it is expected that other cumulative projects would be required to prepare and implement traffic safety plans, similar to the plan required under Mitigation Measure TR-1b above, to manage construction traffic. This would reduce the far-term cumulative traffic hazard impact to *less than significant*.

In summary, the cumulative far-term transportation and traffic impacts associated with the combined development of the WSP gen-tie projects and other pending, approved and completed projects would be *less than significant with mitigation*.

Mitigation Measures:

Westlands Solar Park. Implement MM TR-1a. No additional mitigation is required.

WSP Gen-Tie Corridors. Implement MM TR-1b. No additional mitigation is required.

REFERENCES/BIBLIOGRAPHY – TRANSPORTATION/TRAFFIC

Caltrans 2002	California Department of Transportation (Caltrans). 2002. Guide for the Preparation of Traffic Impacts Studies. http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf
Caltrans 2009	California Department of Transportation (Caltrans). 2009. Levels of Service and Caltrans. January https://www.opr.ca.gov/docs/Scott_Sauers.pdf
Caltrans 2013	California Department of Transportation (Caltrans), Office of System Planning, District 6. 2013. State Route 41 Transportation Concept Report. July http://www.dot.ca.gov/d6/planning/tcrs/sr41tcr/sr41_tcr_072013_web.pdf
Caltrans 2017	California Department of Transportation (Caltrans), Division of Traffic Operations. 2017. 2015 Traffic Volumes on the California State Highway System. January http://www.dot.ca.gov/trafficops/census/docs/2015_aadt_volumes.pdf

3. Environmental Setting, Impacts, and Mitigation Measures
3.13. Transportation/Traffic

Caltrans 2016	California Department of Transportation (Caltrans), Office of System Planning, District 6. 2016. State Route 198 Transportation Concept Report. June http://www.dot.ca.gov/d6/planning/tcrs/sr198tcr/sr198_tcr_final_june_2016.pdf
Fresno County 2000b	County of Fresno. 2000. Fresno County 2000 General Plan –Policy Document. October. http://www2.co.fresno.ca.us/4510/4360/General_Plan/GP_Final_policy_doc/Table_of_Contents_rj_blue.pdf
Fresno County 2016	County of Fresno. 2016. <i>Fresno County Code of Ordinances</i> . As amended through April 26, 2016. https://www.municode.com/library/ca/fresno_county/codes/code_of_ordinances
Fresno COG 2013	Fresno Council of Governments (Fresno COG). 2013. <i>Fresno County Regional Traffic Monitoring Report</i> . April. http://www.fresnocog.org/sites/default/files/publications/Modeling/TrafficCountReport_2007-2012.PDF
Fresno COG 2014	Fresno Council of Governments (Fresno COG). 2014. <i>2014 Regional Transportation Plan (RTP) and Sustainable Communities Strategy – Program EIR</i> . March. http://www.fresnocog.org/sites/default/files/publications/RTP/Final_RTP/Fresno_COG_2014_RTP_Draft_PEIR.pdf
KCAG 2014	Kings County Association of Governments (KCAG). 2013. <i>2014 Kings County Regional Transportation Plan (RTP)</i> . July. http://www.kingscog.org/assets/2014%20RTP%20Adopted%20Chapters.pdf
Kings County 2003	Kings County. 2003. <i>County of Kings Improvement Standards</i> . May 6, 2003. http://www.countyofkings.com/home/showdocument?id=3098
Kings County 2010a	County of Kings. 2010. <i>2035 Kings County General Plan – Land Use Element</i> . January. http://www.countyofkings.com/home/showdocument?id=13503
Kings County 2010d	County of Kings. 2010. <i>2035 Kings County General Plan – Circulation Element</i> . January. http://www.countyofkings.com/home/showdocument?id=3116
Kings County 2016a	Kings County. 2016. <i>Kings County Code of Ordinances, as amended through October 4, 2016</i> . https://www.municode.com/library/ca/kings_county/codes/code_of_ordinances
Kings County 2016b	Kings County. 2016. <i>Kings County Development Code. Kings County Code of Ordinances, Appendix A - Ordinance No. 668.12</i> . Dated January 26, 2016; Effective February 26, 2016.

3. Environmental Setting, Impacts, and Mitigation Measures
3.13. Transportation/Traffic

<http://www.countyofkings.com/home/showdocument?id=12535>

JLUSPC 2011

Naval Air Station Lemoore Joint Land Use Study Policy Committee (JLUSPC).
2011. *NAS Lemoore Joint Land Use Study – Final Release*. August 30.
http://www.kingscog.org/index.asp?SEC=1E7B4327-327C-4971-85B4-05AF6F18D22A&Type=B_LIST

This page intentionally left blank