

5.11 TRAFFIC AND TRANSPORTATION

The traffic and transportation section provides a summary of the transportation infrastructure and traffic conditions in the SJS 1&2 vicinity and addresses the direct construction and operating impacts of the proposed development on the surrounding transportation system. It addresses potential impacts associated with traffic and transportation systems in the project area that may result from construction and operation of the SJS 1&2 Hybrid power plants. The analysis considers the regional and local roadways, current and project-related traffic conditions, access to the project site and transportation of hazardous materials related to construction and operation of the plants.

The Project will be located in an unincorporated area of southwestern Fresno County east of the City of Coalinga. The Project is approximately 8 miles north of Kings County. Roadway access to the site will be from West Jayne Avenue, which runs adjacent to and parallel to the northern border of the site. Regional access to the site will be provided via I-5, about three miles east of the Project driveway. Figure 5.11-1, Project Vicinity, shows the Project site in context to the regional circulation system.

The Project study area for the transportation analysis includes West Jayne Avenue in the immediate vicinity of the SJS 1&2 site and the surrounding local and regional circulation system. This circulation system could be potentially affected by vehicle traffic generated by SJS 1&2 both during construction and for the duration of project operations. Traffic patterns for each of these phases will be fundamentally different.

The traffic analysis conducted for the Project analyzed the following scenarios:

- Existing Conditions
- Project Construction
- Project Operations

5.11.1 Affected Environment

This subsection describes the existing conditions of the roadway circulation system within the study area. This section also presents the traffic volume data and existing operating conditions for the study roadway segments and intersections.

Land uses and major traffic generators of surrounding environment include agricultural fields to the north, east, and south, and a State owned hospital immediately west of the Project site. The rural nature of the site minimizes potential conflicts associated with urban infrastructures such as airports, transportation centers, rail lines, and other ancillary facilities supporting commerce and industries. Therefore, the focus of this traffic impact analysis is the evaluation of transportation and circulation impacts to the adjacent facilities during the construction and operation phase of the project.

5.11.1.1 Existing Roadway Network

West Jayne Avenue provides access to the Project site, and links the project to I-5 in the east via an existing modified diamond interchange. West Jayne Avenue is a two-lane rural highway with an east-

west orientation. It is designated as State Route 33 between Elm Avenue (State Route 198) and Alpine Avenue (SR 33). The current posted speed limit near the Project site is 55 miles per hour (mph).

I-5 is the primary north-south route for interregional and interstate business, freight, tourist, and recreation travel, linking Southern California to Northern California and the Pacific Northwest. In addition to I-5, the Study Area is also served by State Routes 33, and 198.

According to the Fresno County General Plan, West Jayne Avenue, Phelps Avenue, El Dorado Avenue, South Calaveras Avenue and West Palmer Avenue are collector streets. SR-33 (Alpine Avenue) and SR-198 are classified as expressway facilities, and as I-5 is classified as an Interstate. Figure 5.11-2, Project Location Map, shows the roadway circulation system serving the Project site.

5.11.1.1.1 Regional Roadway Facilities

Interstate 5. I-5 is a major north-south route through the Central Valley and the length of California, extending from San Diego County towards the states of Oregon and Washington. Within the project study area, I-5 provides two mainline lanes in each direction with wide shoulders and a center median. Current (2007) ADT volume on I-5 near West Jayne Avenue ranges between 32,000 vehicles per day (vpd) during off-peak months and 37,000 vpd during peak months. Truck traffic ranges from 20 to 30 percent. Within the project study area, the study segment of I-5 generally follows a straight generally north-northwesterly trending alignment with relatively flat vertical profile. There is adequate median width separating the opposing traveled way and wide shoulders for roadway stops and emergencies. There are no identified geometric features that would affect public safety.

SR 33 is a two lane roadway that is west of and generally parallel to I-5. SR 198 is generally a two-lane state highway that connects SR 33 and Coalinga with the Central Coast.

5.11.1.1.2 Local Roadway Facilities

West Jayne Avenue. West Jayne Avenue is a two-lane east-west roadway classified as a collector in the Fresno County General Plan. West Jayne Avenue serves as the primary access to the Project site. Current ADT volume on West Jayne Avenue in the vicinity of the Project site is estimated to be between 3,300 and 4,100 vpd based upon the Fresno County 2007 Travel Demand Model (Model). Within the project study area West Jayne Avenue has a generally straight horizontal east-west alignment and level vertical profile. There are no identified geometric features that would affect public safety.

Alpine Avenue. Alpine Avenue is a two-lane rural highway with a north-south orientation east of the City of Coalinga. It runs south from West Jayne Avenue and is designated as State Route 33. The Alpine Avenue approach at West Jayne Avenue is stop controlled.

5.11.1.2 Bicycle Facilities

According to the routes defined in the Fresno County Rural Bikeway system, West Jayne Avenue is designated as a part of the rural bikeway network.

5.11.1.3 Airport Facilities

The following airports currently operate in the area:

- Coalinga Municipal Airport is located 7 miles or 36,960 feet west of the Project site.
- Harris Ranch Airport is located about 8 miles or 42,240 north of the Project site.
- Lemoore Naval Air Station is located about 16 miles or 84,480 feet northeast of the Project site.

These airports are beyond the 20,000 foot horizontal distance criteria to warrant FAA notification requirements. See also Section 5.9, Land Use, and Section 5.13, Visual Resources, for more information on FAA compliance.

5.11.1.4 Existing Roadway and Intersection Geometrics

Table 5.11-1 shows the key study area intersections that have been identified for analysis under existing, project construction, and operations conditions. Figure 5.11-3 shows the existing intersection geometrics.

**Table 5.11-1
Study Intersections**

Intersection	Traffic Control
Calaveras Ave/West Jayne Avenue	Unsignalized
S Alpine Ave/West Jayne Avenue	Unsignalized
I-5 Southbound Ramp/West Jayne Avenue	Unsignalized
I-5 Northbound Ramp/West Jayne Avenue	Unsignalized

5.11.1.4.1 Existing Roadway and Intersection Volumes

Figure 5.11-4 shows the existing traffic volume for the key study area intersections. Study area turning movement counts were obtained from the report *Traffic Impact Study, Proposed General Plan Amendment, Northeast of the Intersection of Polk Street and Merced Avenue, Coalinga, California*, by Peters Engineering, 2007, as provided by the City of Coalinga.

5.11.1.4.2 Existing Level of Service Analysis

The results of the existing conditions roadway segment and intersection Level of Service (LOS) analysis are discussed separately below. LOS is an indicator of operating conditions on a roadway or at an intersection and is defined in categories ranging from A to F. These categories can be viewed much like school grades, with A representing the best traffic flow conditions and F representing poor conditions. LOS A indicates free-flowing traffic and LOS F indicates substantial congestion with stop-and-go traffic and long delays at intersections.

5.11.1.4.3 Existing Roadway Segment Analysis

Table 5.11-2 displays the LOS analysis results for key study area roadway segments under existing conditions. Two roadway segments of West Jayne Avenue were selected for evaluation, as they are the locations that would most likely be affected by project traffic during both project construction and operation.

**Table 5.11-2
Roadway Segment LOS – Existing Conditions**

Roadway	Segment	Cross-Section Classification	Traffic Volume	Level of Service (LOS)
I-5 Freeway	Kings/Fresno County Line to RTE 198 (North of West Jayne Avenue)	4-Lane Freeway	56,000 ¹	C ³
West Jayne Avenue	I-5 to Project Site Access	2-Lane Collector	394/486 ²	C/C ⁴
West Jayne Avenue	West of Project Site Access	2-Lane Collector	636/659 ²	C/C ⁴

Notes:

¹ ADT

² AM/PM Peak Hour Volumes

³ ADT LOS

⁴ Peak Hour LOS

As shown in Table 5.11-2, all study roadway segments are currently operating at acceptable LOS C under existing conditions.

5.11.1.4.4 Existing Intersection Analysis

Table 5.11-3 displays the intersection LOS and average vehicle delay results for the key study area intersections using Highway Capacity Manual (HCM) Operations Methodology under existing conditions. All intersections are currently unsignalized. The LOS calculation worksheets for existing conditions are provided in Appendix J.

**Table 5.11-3
Peak Hour Intersection LOS – Existing Conditions**

Intersection	AM Peak Hour		PM Peak Hour	
	LOS ²	Average Delay (sec) ²	LOS ²	Average Delay (sec) ²
I-5 NB Ramps/West Jayne Avenue ¹	B	11.9	B	12
I-5 SB Ramps/West Jayne Avenue ¹	B	10.2	B	10.2
Alpine Ave (SR-33)/West Jayne Avenue ¹	B	13.8	B	14.3
Calaveras Avenue/ West Jayne Avenue ¹	B	13.2	B	13.7

Notes:

¹All intersections are unsignalized two-way stop controlled. West Jayne Avenue is the major roadway.

²LOS and Average Delay for the critical movements are reported.

As shown in Table 5.11-3, all study intersections are currently operating at acceptable LOS B existing conditions.

5.11.2 Environmental Consequences

This subsection provides the criteria used to determine if the project would have the potential to result in significant traffic-related impacts within the study area.

5.11.2.1 LOS Concept

As introduced in subsection 5.11.1.4, LOS is an indicator of operating conditions on a roadway or intersection and is defined in categories ranging from A to F, with A representing the best traffic flow conditions and F representing poor conditions. Table 5.11-4 provides the level of service definitions as specified in the HCM.

Level of Service is a qualitative assessment of operational or service characteristics that measures the effect of a number of transportation related factors, including volume, speed and travel time, interruptions, freedom to maneuver, driving comfort, and convenience. Level of Service covers the entire range of traffic operations that are designated from “A” (best conditions) to “F” (worst conditions). Level of Service “E” describes conditions approaching or at maximum capacity.

5.11.2.2 Significance Thresholds

The following policy, as cited from the Transportation and Circulation Element Policy Document October 2000, Fresno County General Plan, was used in the assessment of potential construction and operational traffic impacts for the Project.

5.11.2.2.1 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. Roadway improvements to increase capacity and maintain LOS standards should be planned and programmed based on consideration of the total overall needs of the roadway system, recognizing the priority of maintenance, rehabilitation, and operation of the existing road system. The County may, in programming capacity-increasing projects, allow exceptions to the level of service standards in this policy where it finds that the improvements or other measures required to achieve the LOS policy are unacceptable based on established criteria. In addition to consideration of the total overall needs of the roadway system, the County shall consider the following factors:

- The right-of-way needs and the physical impacts on surrounding properties;
- Construction and right-of-way acquisition costs;
- The number of hours that the roadway would operate at conditions below the standard;
- The ability of the required improvement to significantly reduce delay and improve traffic operations; and
- Environmental impacts upon which the County may base findings to allow an exceedance of the standards.

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.”

**Table 5.11-4
LOS Descriptions**

Average Vehicle Delay per Vehicle	LOS Characteristics
≤ 10	LOS A describes operations with very low delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay
>10 and ≤20	LOS B describes operations with delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.
>20 and ≤35	LOS C describes operations with delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
>35 and ≤55	LOS D describes operations with delay greater than 35 and up to 55 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

**Table 5.11-4
Level of Service Descriptions
(Continued)**

Average Vehicle Delay per Vehicle	LOS Characteristics
>55 and ≤80	LOS E describes operations with delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.
>80	LOS F describes operations with delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing cause to such delay levels.

Source: 2000 Highway Capacity Manual, TRB Special Report 209

5.11.2.3 Construction-related Impacts (Year 2010 Peak Project Construction)

The Project construction is anticipated to commence in Year 2010, with construction lasting about fifteen months. The average construction workforce will consist of up to 744 workers and 51 (30 light delivery and 21 heavy duty delivery) trucks per day at construction peak.

Year 2010 baseline conditions were developed using 1.0 percent annual growth factor to account for cumulative projects within the project study area. The City of Coalinga and Fresno County were both consulted and that no new projects are planned to be constructed in the project area prior to construction activities.

During the Project construction period, small quantities of hazardous materials and construction waste products will be hauled to and from the project site. More detailed discussion on project waste management and handling of hazardous materials are presented in Section 5.14, Waste Management and Section 5.15, Hazardous Materials, respectively. All applicable LORS will be observed during the course of project construction.

5.11.2.4 Operations-related Impacts (Year 2011 Project Operations)

Similar to Year 2010 construction conditions, Year 2011 baseline conditions were developed. Upon completion of construction and commissioning of the proposed facility, SJS 1&2 will generate operations-related trips that are substantially less than during peak construction activities.

During the operational phase of the project, a 60-employee workforce will oversee operations and maintenance of the project. Plant operations are described in Section 3.0 Project Description. Biomass deliveries and ash removal will be a regular activity, with 450,000 green tons of biomass being delivered to both plants annually. Ash is expected to be generated at 5% of the greenwaste rate. Also, two or three maintenance-related trips per week are expected to include transport of hazardous as part of plant operations.

During project operations, small quantities of hazardous materials and operational waste products will be hauled to and from the Project site. More detailed discussion on project waste management and handling of hazardous materials are presented in Section 5.14, Waste Management and Section 5.15, Hazardous Materials, respectively. All applicable LORS will be observed during the project operations.

5.11.2.5 Project Distribution

It is assumed that the majority of the project's construction workforce needs will be met with local labor from within Fresno County. The short-term need for specialty trades that cannot be filled from local labor sources during project construction are assumed to be filled by workers residing elsewhere. It is assumed that construction traffic trips would primarily use I-5. Long-term operations and maintenance manpower are anticipated to be locally sourced and would primarily use West Jayne Avenue and local roadways.

5.11.2.6 Project Trip Generation

5.11.2.6.1 Peak Project Construction Trip Generation

For analysis purposes, the peak month during the fifteen-month construction schedule was used in the construction traffic impact analysis for the proposed project. This assumption presents the worst-case scenario and the most conservative estimation of project construction traffic.

The traffic impact analysis evaluated the AM peak hour traffic between 7:00 AM to 9:00 AM and PM peak hour traffic between 4:00 PM to 6:00 PM. Typically, construction activity early work starts before the adjacent street peak hour traffic; however, for traffic impact analysis purposes, it was conservatively assumed that construction worker traffic would commute within the adjacent street peak hour traffic windows.

In addition to the construction workforce trips, construction related equipment deliveries and truck traffic would contribute additional trips during the construction period. Truck and heavy equipment traffic was estimated using a passenger car equivalent (PCE) factor of 3 cars per truck.

Table 5.11-5 presents the peak project construction trip generation estimates for the proposed project.

The following discussion explains in greater detail the methodology used in the estimation of the peak trip generation assumptions.

- **Peak SJS 1&2 Construction Workers** – It was conservatively assumed that the two-thirds of the 734 peak construction workers would drive alone and commute during the 7-9 AM and 4-6 PM peak hours, resulting in 484 inbound trips and 0 outbound trips during the AM peak hour and 0 inbound trips and 0 outbound trips during the PM peak hour. Based on the worst case scenario that each worker will drive alone results in 1,468 daily trips.
- **Equipment Deliveries** – The combined total deliveries comprising of lightweight and heavy duty trucks is 246 trips per day in PCE.

**Table 5.11-5
Peak Project Construction Trip Generation**

	Daily Round Trips	AM Peak Hour Trips		PM Peak Hour Trips	
		In	Out	In	Out
Construction Workers & Staff ¹	1,468	484	0	0	484
Construction Deliveries (Light Trucks in PCE) ^{2,4,5}	120	9	3	3	9
Construction Deliveries (Heavy Trucks in PCE) ^{3,4,6}	126	9	3	3	9
Total Trips	1,714	502	6	6	502

Notes:

- ¹ Worker and Staff traffic during Peak Project Construction Month in Year 2010. It is assumed that 2/3 of the 734 worker and staff trips will enter and exit the site during morning and evening peak-hours, respectively.
- ² Light Trucks were converted to PCE assuming 1 Truck equal to 2 Passenger Cars
- ³ Heavy Duty Trucks were converted to PCE assuming 1 Truck equal to 3 Passenger Cars
- ⁴ PCE = Passenger Car Equivalent
- ⁵ Based on peak 30 light delivery trucks per day, approximately 30 percent of the Truck Trips are assumed to enter the site during the morning peak-hour and approximately 10 percent of the Truck Trips are assumed to exit the site during the morning peak hour. The remaining 60 percent of the truck trips will access the site during the off-peak hours of the day.
- ⁶ Based on peak 21 heavy duty delivery trucks per day, approximately 10 percent of the Truck Trips are assumed to enter the site during the evening peak-hour and approximately 30 percent of the Truck Trips are assumed to exit the site during the evening peak hour. The remaining 60 percent of the truck trips will access the site during the off-peak hours of the day.

5.11.2.6.2 Project Operations Trip Generation

Upon completion of Project construction, start up and commissioning will follow in the first quarter of 2011 for SJS 1 and in the second quarter of 2011 for SJS 2. During plant operations, employee and biomass delivery trips comprise the majority of trips generated on-site while occasional visitor trips, maintenance visits and as-needed material and equipment deliveries are anticipated on a non-recurring basis and will most likely be occurring outside of the 7-9 AM and 4-6 PM analysis peak hours.

Table 5.11-6 presents operations trip generation estimates for the proposed project.

**Table 5.11-6
Project Operations Trip Generation**

	Daily Round Trips	AM Peak Hour Trips		PM Peak Hour Trips	
		In	Out	In	Out
Operational Workforce ¹	120	30	18	18	30
Visitors ²	16	1	1	1	1
Deliveries-Biomass (in PCE) ^{3, 4}	750	60	15	15	60
Deliveries-Misc (in PCE) ^{3, 5}	18	3	0	0	3
Disposal-Ash (in PCE) ^{3, 6}	60	3	3	3	3
Disposal-Misc (in PCE) ^{3, 7}	6	3	0	0	0
Total Trips	970	100	37	37	97

Notes:

- ¹ Approximately 60 staff employee will be working during the project operations period. Note that operations will consist of 3 shifts and majority of the people will be working in daytime (2nd shift).
- ² Approximately 8 daily visitors are expected to arrive at the Project site during the project operations period.
- ³ PCE = Passenger Car Equivalent. One truck is equal to 3 passenger cars.
- ⁴ Approximate annual usage = 500,000 BDT (bone dry tons). Annual truck loads at 16 BDT per truck = 31,250. Number of truck loads per day assuming 261 operating days in year = 120. To be conservative this analysis assumed 125 truck loads per day. This equals to 250 round trips per day. Total number of daily trips in PCE is 750 (assuming 1 truck = 3PCE). It is also assumed that approximately 20 percent of the daily truck trips will enter and exit the site during the morning and evening peak-hours (10 percent during each peak-hour).
- ⁵ One truck is assumed to arrive during morning peak-hour and leave during the evening peak-hour for miscellaneous-delivery. The remaining miscellaneous-delivery trips will arrive and leave the site during the off-peak hours of the day.
- ⁶ Approximately 5 percent of the biomass is expected to be ash after use (by-product) and will be removed from the site during the project operations period. Note that, 10 tons/truck load is assumed for the ash disposal.
- ⁷ One truck is assumed to arrive during morning peak-hour and leave during the off-peak hour of the day for miscellaneous-disposal.

5.11.2.7 Year 2010 Conditions Impact Analysis

This section describes Year 2010 traffic conditions for both “with” and “without” the proposed peak project construction. The following scenarios were analyzed under Year 2010 conditions:

- Year 2010 No Project Conditions
- Year 2010 Peak Project Construction Conditions

5.11.2.7.1 Year 2010 No Project Conditions

The Year 2010 No Project baseline conditions builds upon existing traffic volume and includes Fresno County Public Works Department recommended ambient traffic growth of 1.0 percent per year to account for potential related cumulative projects within the project study area. Figure 5.11-5 shows the Year 2010 No Project peak hour traffic volumes at the project study intersections.

5.11.2.7.2 Year 2010 No Project Roadway Segment Analysis

Table 5.11-7 summarizes the results of the Year 2010 No Project roadway segment analysis. The roadway segment LOS calculation worksheets are provided in Appendix J.

**Table 5.11-7
Roadway Segment LOS
Year 2010 No Project Conditions**

Roadway	Segment	Cross-Section Classification	Traffic Volume	Level of Service (LOS)
I-5 Freeway	Kings/Fresno County Line to RTE 198 (North of West Jayne Avenue)	4-Lane Freeway	61,700 ¹	C ³
West Jayne Avenue	I-5 to Project Site Access	2-Lane Collector	404/500 ²	C/C ⁴
West Jayne Avenue	West of Project Site Access	2-Lane Collector	652/676 ²	C/C ⁴

Notes:

¹ ADT

² AM/PM Peak Hour Volumes

³ ADT LOS

⁴ Peak Hour LOS

As shown in Table 5.11-7, all study roadway segments are forecast to operate at acceptable LOS C under Year 2010 No Project conditions.

5.11.2.7.3 Year 2010 No Project Intersection Analysis

Table 5.11-8 displays the intersection LOS and average vehicle delay results under Year 2010 Peak No Project conditions. The intersection LOS calculation worksheets are provided in Appendix J.

**Table 5.11-8
Peak Hour Intersection LOS
Year 2010 No Project Conditions**

Intersection	AM Peak Hour		PM Peak Hour	
	LOS ²	Average Delay (sec) ²	LOS ²	Average Delay (sec) ²
I-5 NB Ramps/West Jayne Avenue ¹	B	12.0	B	13
I-5 SB Ramps/West Jayne Avenue ¹	B	10.3	B	10.2
Alpine Ave (SR-33)/West Jayne Avenue ¹	B	14.1	B	14.6
Calaveras Avenue/ West Jayne Avenue ¹	B	13.4	B	13.9

Notes:

¹ All intersections are unsignalized two-way stop controlled. West Jayne Avenue is the major roadway.

² LOS and Average Delay for the critical movements are reported.

As shown in Table 5.11-8, study intersections are forecast to operate at acceptable LOS B under Year 2010 No Project conditions.

5.11.2.7.4 Year 2010 Peak Project Construction Conditions

This scenario includes Year 2010 No Project traffic volumes plus SJS 1&2 peak project construction activity trip generation. Figure 5.11-6 shows Year 2010 Peak Project Construction peak hour traffic volumes at the project study intersections.

5.11.2.7.5 Year 2010 Peak Project Construction Roadway Segment Analysis

Table 5.11-9 displays the LOS analysis results for the study area roadway segments under Year 2010 with Peak Project Construction conditions.

**Table 5.11-9
Roadway Segment LOS
Year 2010 Peak Project Construction Conditions**

Roadway	Segment	Cross-Section Classification	Traffic Volume	Level of Service (LOS)
I-5 Freeway	Kings/Fresno County Line to RTE 198 (North of West Jayne Avenue)	4-Lane Freeway	62,155 ¹	C ³
West Jayne Avenue	I-5 to Project Site Access	2-Lane Collector	787/883 ²	C/C ⁴
West Jayne Avenue	West of Project Site Access	2-Lane Collector	772/796 ²	C/C ⁴

Notes:

¹ ADT

² AM/PM Peak Hour Volumes

³ ADT LOS

⁴ Peak Hour LOS

As shown in Table 5.11-9, all study roadway segments are forecast to operate at acceptable LOS C under Year 2010 Peak Project Construction conditions. The roadway segment LOS calculation worksheets are provided in Appendix J.

5.11.2.7.6 Year 2010 Peak Project Construction Intersection Analysis

Table 5.11-10 displays the intersection LOS and average vehicle delay results under Year 2010 with Peak Project Construction conditions. The intersection LOS calculation worksheets are provided in Appendix J.

**Table 5.11-10
Peak Hour Intersection LOS
Year 2010 Peak Project Construction Conditions**

Intersection ¹	AM Peak Hour		PM Peak Hour	
	LOS ²	Average Delay (sec) ²	LOS ²	Average Delay (sec) ²
I-5 NB Ramps/West Jayne Avenue	C	19.4	C	16.5
I-5 SB Ramps/West Jayne Avenue	B	14.6	B	11.2
Alpine Ave (SR-33)/West Jayne Avenue	C	16.4	C	17.3
Calaveras Avenue/ West Jayne Avenue	C	15.2	C	15.8

Notes:

¹ All intersections are unsignalized two-way stop controlled. West Jayne Avenue is the major roadway.

² LOS and Average Delay for the critical movements are reported.

As shown in Table 5.11-10, the study intersections are forecast to operate at acceptable LOS C or better under Year 2010 with Peak Project Construction conditions. As previously discussed, the Year 2010 Peak Construction activities were analyzed to reflect the worst case traffic analysis scenario during construction of SJS 1&2.

5.11.2.7.7 Year 2010 Conditions Traffic Impact Summary

Based on the Fresno County Department of Public Works traffic impact threshold criteria, none of the project study intersections would be significantly impacted during the peak project construction activity in Year 2010. The existing circulation system including the study freeway and roadway segments and intersections have sufficient capacity to accommodate peak SJS 1&2 construction traffic.

5.11.2.8 Year 2011 Conditions Impact Analysis

This section focuses on Year 2011 traffic conditions for both “with” and “without” proposed project operations.

The operation of SJS 1&2 will require operational workforce on scheduled shifts and delivery of biomass feedstock and disposal of ash byproducts. The following analysis scenarios were conducted under Year 2011 Conditions analysis:

- Year 2011 No Project Conditions
- Year 2011 Project Operations Conditions

5.11.2.8.1 Year 2011 No Project Conditions

The Year 2011 No Project baseline conditions builds upon the Year 2010 No Project conditions with minor increase in ambient traffic growth to account for background traffic. Figure 5.11-7 shows Year 2011 No Project peak hour traffic volume at the project study intersections.

5.11.2.8.2 Year 2011 No Project Roadway Segment Analysis

Table 5.11-11 displays the intersection LOS and average vehicle delay results under Year 2011 No Project conditions. The roadway segment LOS calculation worksheets are provided in Appendix J.

**Table 5.11-11
Roadway Segment LOS
Year 2011 No Project Conditions**

Roadway	Segment	Cross-Section Classification	Traffic Volume	Level of Service (LOS)
I-5 Freeway	Kings/Fresno County Line to RTE 198 (North of West Jayne Avenue)	4-Lane Freeway	63,600 ¹	C ³
West Jayne Avenue	I-5 to Project Site Access	2-Lane Collector	407/503 ²	C/C ⁴
West Jayne Avenue	West of Project Site Access	2-Lane Collector	660/682 ²	C/C ⁴

Notes:

¹ ADT

² AM/PM Peak Hour Volumes

³ ADT LOS

⁴ Peak Hour LOS

As shown in Table 5.11-11, all study roadway segments are forecast to operate at acceptable LOS C under Year 2011 No Project conditions.

5.11.2.8.3 Year 2011 No Project Intersection Analysis

Table 5.11-12 displays the intersection LOS and average vehicle delay results under Year 2011 No Project conditions. The intersection LOS calculation worksheets are provided in Appendix J.

**Table 5.11-12
Peak Hour Intersection LOS
Year 2011 No Project Conditions**

Intersection	AM Peak Hour		PM Peak Hour	
	LOS ²	Average Delay (sec) ²	LOS ²	Average Delay (sec) ²
I-5 NB Ramps/West Jayne Avenue ¹	B	12.0	B	13.1
I-5 SB Ramps/West Jayne Avenue ¹	B	10.3	B	10.2
Alpine Ave (SR-33)/West Jayne Avenue ¹	B	14.2	B	14.7
Calaveras Avenue/ West Jayne Avenue ¹	B	13.5	B	14.0

Notes:

¹All intersections are unsignalized two-way stop controlled. West Jayne Avenue is the major roadway.

²LOS and Average Delay for the critical movements are reported.

As shown in Table 5.11-12, the result of the Year 2011 No Project conditions analysis shows that all study intersections are forecast to operate at acceptable LOS B conditions.

5.11.2.8.4 Year 2011 Project Operations Conditions

This scenario includes Year 2011 No Project traffic volume and incorporates the proposed project operation added trips. Figure 5.11-8 shows Year 2011 Project operations AM and PM peak hour traffic volumes at the project study intersections.

5.11.2.8.5 Year 2011 Project Operations Roadway Segment Analysis

Table 5.11-13 displays the LOS analysis results for the key study area roadway segments under Year 2011 Project Operations conditions. The roadway segment LOS calculation worksheets are provided in Appendix J.

**Table 5.11-13
Roadway Segment LOS
Year 2011 Project Operations Conditions**

Roadway	Segment	Cross-Section Classification	Traffic Volume	Level of Service (LOS)
I-5 Freeway	Kings/Fresno County Line to RTE 198 (North of West Jayne Avenue)	4-Lane Freeway	63,900 ¹	C ³
West Jayne Avenue	I-5 to Project Site Access	2-Lane Collector	512/605 ²	C/C ⁴
West Jayne Avenue	West of Project Site Access	2-Lane Collector	690/712 ²	C/C ⁴

Notes:

¹ ADT

² AM/PM Peak Hour Volumes

³ ADT LOS

⁴ Peak Hour LOS

As shown in Table 5.11-13, all study roadway segments are forecast to operate at acceptable LOS C under Year 2011 Project Operations conditions.

5.11.2.8.6 Year 2011 Project Operations Intersection Analysis

Table 5.11-14 displays intersection LOS and average vehicle delay results under Year 2011 Project Operations conditions. The intersection LOS calculation worksheets are provided in Appendix J.

**Table 5.11-14
Peak Hour Intersection LOS
Year 2011 Project Operations Conditions**

Intersection ¹	AM Peak Hour		PM Peak Hour	
	LOS ²	Average Delay (sec) ²	LOS ²	Average Delay (sec) ²
I-5 NB Ramps/West Jayne Avenue	B	13.3	B	14.1
I-5 SB Ramps/West Jayne Avenue	B	10.7	B	10.2
Alpine Ave (SR-33)/West Jayne Avenue	B	14.7	C	15.3
Calaveras Avenue/ West Jayne Avenue	B	14.0	B	14.4

Notes:

¹ All intersections are unsignalized two-way stop controlled. West Jayne Avenue is the major roadway.

² LOS and Average Delay for the critical movements are reported.

As shown in Table 5.11-14, the result of the Year 2011 Project Operation conditions shows that all study intersections are forecast to operate at acceptable LOS C or better during both AM and PM peak hour operations conditions.

5.11.2.8.7 Year 2011 Conditions Traffic Impact Summary

As discussed previously, the Year 2010 Peak Construction activities represent the worst case traffic analysis scenario for the proposed SJS 1&2 Project. Upon completion of construction and commissioning of the proposed facility by Year 2011, SJS 1&2 will generate operations-related trips that are substantially less than peak construction activities. Post-construction background traffic within the study area is anticipated to be slightly higher than pre-construction levels with minor incremental traffic increase attributed to ambient growth and added trips from plant operations.

Based on the Fresno County Department of Public Works traffic impact threshold criteria, none of the project study intersections would be significantly impacted with the start of project operations by Year 2011. The projected incremental net increase of trips attributed to project operations would not create significant traffic impacts to the surrounding roadway circulation system.

5.11.3 Cumulative Impact Analysis

Based on available information from City of Coalinga and Fresno County, the Project's construction traffic would not coincide with known potential future projects, so its contribution to cumulative traffic effects during construction would not be cumulatively considerable, and cumulative effects of the Project would therefore be less than significant.

During Project operations, the traffic analysis conservatively included a 1.0 percent annual ambient growth rate as part of the Year 2011 No Project conditions to account for traffic growth in the study area. The result of the traffic analysis showed that the proposed SJS 1&2 operational traffic combined with future ambient traffic growth would not be cumulatively considerable, and cumulative effects of the Project would therefore be less than significant.

Based on the above findings it is anticipated that the Project will not result in cumulative construction and operational Project impact.

5.11.4 Mitigation Measures

5.11.4.1 Project Construction Mitigations

The result of project construction traffic analysis showed that no study roadway segment or intersection would be significantly impacted by the proposed project during Year 2010 Peak Construction activities. Based on these findings, the Year 2010 Peak Construction conditions would not require traffic mitigation.

5.11.4.2 Operations Mitigations

None proposed. There are no identified project operational traffic impacts.

5.11.4.3 Cumulative Effects Mitigations

None proposed. There are no identified cumulative project construction and operational traffic impacts.

5.11.5 LORS Compliance

The project would comply with the applicable traffic and transportation LORS discussed below. Table 5.11-15 summarizes the applicable LORS and Table 5.11-16 lists agency contacts.

**Table 5.11-15
Summaries of LORS**

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
Federal					
	Title 49, Code of Federal Regulations, Section 171-177	Governs the transportation of hazardous materials, including the marking of transportation vehicles.	Section 5.11.5.1, Federal Authorities and Administering Agencies	California Highway Patrol	2
	Title 14, Code of Federal Regulations, Section 77.13(2)(i)	Requires applicant to notify FAA of any construction greater than height limits defined by the FAA.	Section 5.11.5.1, Federal Authorities and Administering Agencies	Federal Aviation Administration	1
State					
	California Vehicle Code, Section 353	Defines the hazardous materials.	Section 5.11.5.12, State Authorities and Administering Agencies	California Highway Patrol	2
	California Vehicle Code, Sections 13369, 15275, 15278	Addresses the licensing of drivers and the classification of license required for the operation of particular types of vehicles. In addition, these sections require the possession of certificates of permitting the operation of vehicles transporting hazardous materials.	Section 5.11.5.12, State Authorities and Administering Agencies	California Department of Motor Vehicles	4

**Table 5.11-15
Summaries of LORS
(Continued)**

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
	California Vehicle Code, Section 31303-31309	Requires transporters of hazardous materials to use the shortest route possible.	Section 5.11.5.12, State Authorities and Administering Agencies	California Highway Patrol	2
	California Vehicle Code, Section 32000-32053	Regulates the licensing of carriers of hazardous materials and noticing requirements.	Section 5.11.5.12, State Authorities and Administering Agencies	California Highway Patrol	2
	California Vehicle Code, Section 32100-32109	Transporters of inhalation hazardous materials or explosive materials must obtain a hazardous materials transportation license.	Section 5.11.5.12, State Authorities and Administering Agencies	California Highway Patrol	2
	California Vehicle Code, Section 34000-34100	Establish special requirements for the flammable and combustible liquids over public roads and highways.	Section 5.11.5.12, State Authorities and Administering Agencies	California Highway Patrol	2
	California Vehicle Code, Section 34500	Regulate the safe operation of vehicles, including those that are used for the transportation of hazardous materials.	Section 5.11.5.12, State Authorities and Administering Agencies	California Highway Patrol	2
	California Vehicle Code, Section 35550	Imposes weight guidelines and restrictions upon vehicles traveling upon freeways and highways.	Section 5.11.5.12, State Authorities and Administering Agencies	California Department of Transportation	3
	California Vehicle Code, Section 35780	Requires approval for a permit to transport oversized or excessive load over state highways.	Section 5.11.5.12, State Authorities and Administering Agencies	California Department of Transportation	3

**Table 5.11-15
Summaries of LORS
(Continued)**

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
	California Streets and Highways Code, Sections 117	Permits for the location in the ROW of any structures or fixtures necessary to telegraph, telephone, or electric power lines or of any ditches, pipes, drains, sewers, or underground structures.	Section 5.11.5.12, State Authorities and Administering Agencies	California Department of Transportation	3
	California Streets and Highways Code, Sections 660, 670, 672, 1450, 1460, 1470, 1480 et seq.	Defines highways and encroachment. Regulate ROW encroachment and the granting of permits with conditions for encroachment in state and county roads.	Section 5.11.5.12, State Authorities and Administering Agencies	California Department of Transportation and Fresno County	3,5
	California Health and Safety Code, Section 25160 et seq.	Addresses the safe transport of the hazardous materials.	Section 5.11.5.12, State Authorities and Administering Agencies	California Highway Patrol	2
	California Department of Transportation Traffic Manual, Section 5-1.1	Requires traffic control plans to ensure continuity of traffic during roadway construction.	Section 5.11.5.12, State Authorities and Administering Agencies	Fresno County	5
Local					
	Fresno County General Plan, Circulation Element, Policy TR-A.2.	Requires LOS D or better operating conditions for rural County roadways	Section 5.11.5.1.3, Local Authorities and Administering Agencies	Fresno County	5
	Fresno County General Plan, Circulation Element, Policy TR-A.3.	New roadways requires conformity with access specifications in the Circulation Diagram and Standards	Section 5.11.5.1.3, Local Authorities and Administering Agencies	Fresno County	5

Notes:

FAA = Federal Aviation Administration

LORS = laws, ordinances, regulations, and standards

ROW = right-of-way

**Table 5.11-16
Agency Contact List for LORS**

	Agency	Contact	Address	Telephone
1	Federal Aviation Administration Western Pacific Region	Karen McDonald	15000 Aviation Boulevard, Lawndale, CA 90261-1002	310.725.6557
2	California Highway Patrol	Officer J. Perry	125 S. 6th Street, Coalinga, CA 93210	559.935.2093
3	Caltrans North Region Permits	Kien Le	Office MS# 41 1823 14 th Street Sacramento, CA 942874-001	916.322.6001
4	Department of Motor Vehicles, Licensing Operations Division	Public Inquiry	2415 1st Avenue Mail Station F101 Sacramento, CA 95818	916.657.8698
5	Transportation Planning Division, Fresno County Public Works Department	Stan Nakagawa Principal Engineer/Manager	2220 Tulare Street, 6th Floor Fresno, CA 93721	559.262.4438

5.11.5.1 Federal Authorities and Administering Agencies

5.11.5.1.1 Title 49, Code of Federal Regulations, Parts 171-177

This regulation governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of transportation vehicles.

The administering agencies for the above regulation are the California Highway Patrol (CHP), Department of Transportation (DOT), and the Pipeline and Hazardous Materials Safety Administration (PHMSA).

The Project would conform to this law by requiring that shippers of hazardous materials use the required markings on their transportation vehicles.

5.11.5.1.2 Title 14, Code of Federal Regulations, Section 77.13(2)(i)

This title requires an applicant to notify the FAA of construction of structures with a height greater than 200 feet from grade or greater than an imaginary surface extending outward and upward at a slope of 10 to 1 from the nearest point of the nearest runway of an airport with at least one runway more than 3,200 feet in length.

The administering agency for the above regulation is the FAA.

The proposed facility heights would not exceed 200 feet. Therefore, notification to the FAA would not be required.

5.11.5.2 State Authorities and Administering Agencies**5.11.5.2.1 California Vehicle Code, Section 353**

This code defines hazardous materials as any substance, material, or device posing an unreasonable risk to health, safety, or property during transportation, as defined by regulations adopted pursuant to Section 2402.7.

The administering agency for the above statute is the CHP.

The Project would comply with these codes by continuing to classify all hazardous materials in accordance with their clarification.

5.11.5.2.2 California Vehicle Code, Sections 2500-2505

This code authorizes the Commissioner of Highway Patrol to issue licenses for the transportation of hazardous materials including explosives.

The administering agency for the above statutes is the CHP.

The Project would comply with these codes by requiring that contractors and employees be properly licensed and endorsed when operating vehicles used to transport hazardous materials.

5.11.5.2.3 California Vehicle Code, Sections 13369, 15275, 15278

These statutes address the licensing of drivers and the license classification required for the operation of particular types of vehicles. A commercial driver's license is required to operate commercial vehicles. An endorsement issued by the Department of Motor Vehicles (DMV) is required to drive any commercial vehicle identified in Section 15278.

The administering agency for the above statutes is the DMV.

The Project would comply with these codes by requiring that contractors and employees be properly licensed and endorsed when operating such vehicles.

5.11.5.2.4 California Vehicle Code, Sections 31303-31309

This code requires that transportation of hazardous materials be on the state or interstate highway that offers the shortest overall transit time possible.

The administering agency for the above statutes is the CHP.

The Project would comply with this law by requiring that shippers/transporters of hazardous materials use the shortest route possible to and from the Project site.

5.11.5.2.5 California Vehicle Code, Sections 31600-31620

This code regulates the transportation of explosive materials.

The administering agency for the above statutes is the CHP.

It must be noted that SJS 1 & 2 would not use explosive materials specifically defined in Section 12000 of the Health and Safety Code. However, the Project would comply with this law by requiring that shippers of other potentially explosive materials have the required licenses from the CHP.

5.11.5.2.6 California Vehicle Code, Sections 32000-32053

This code authorizes the CHP to inspect and license motor carriers transporting hazardous materials of the type requiring placards.

The administering agency for the above regulation is the CHP.

The Project would comply with this law by requiring that motor carriers of hazardous materials be properly licensed by the CHP.

5.11.5.2.7 California Vehicle Code, Sections 32100-32109

This code requires that shippers of inhalation hazards in bulk packaging to comply with rigorous equipment standards, inspection requirements, and route restrictions.

The administering agency for the above regulation is the CHP.

If applicable, the Project would comply with this law by requiring shippers of these types of material to comply with all route restrictions, equipment standards, and inspection requirements.

5.11.5.2.8 California Vehicle Code, Sections 34000-34100

This code establishes special requirements for vehicles having a cargo tank and for hazardous waste transport vehicles and containers, as defined in Section 25167.4 of the HSC. The commissioner shall provide for the establishment, operation, and enforcement of random on- and off-highway inspections of cargo tanks and hazardous waste transport vehicles and containers and ensure that they are designed, constructed, and maintained in accordance with the regulations adopted by the commissioner pursuant to this code and Chapter 6.5 (commencing with Section 25100) of Division 20 of the HSC.

The administering agency for the above regulation is the CHP.

The Project would comply with this law by requiring that shippers of hazardous materials maintain their hazardous material transport vehicles in a manner that ensures the vehicles will pass CHP inspections.

5.11.5.2.9 California Vehicle Code, Section 3500

This CVC regulates the safe operation of vehicles, including those vehicles that are used for the transportation of hazardous materials.

The administering agency for the above regulation is the CHP.

The Project would comply with this law by requiring shippers of hazardous materials to have the necessary permits, inspections, and licenses issued by the CHP for safe operation of the hazardous materials transport vehicles.

5.11.5.2.10 California Vehicle Code, Section 35550

This code imposes weight guidelines and restrictions upon vehicles traveling upon freeways and highways. The section holds that “a single axle load shall not exceed 20,000 pounds. The load on any one wheel or wheels supporting one end of an axle is limited to 10,500 pounds. The front steering axle load is limited to 12,500 pounds.” Furthermore, CVC Section 35551 defines the maximum overall gross weight as 80,000 pounds and adds that “the gross weight of each set of tandem axles shall not exceed 34,000 pounds.”

The administering agency for the above statute is the Caltrans.

The Project would comply with this code by requiring compliance with weight restrictions and by requiring heavy haulers to obtain permits, if required, prior to delivery of any heavy haul load.

5.11.5.2.11 California Vehicle Code, Section 35780

This CVC requires a Single-Trip Transportation Permit to transport oversized or excessive loads over state highways. The permit can be acquired through the Caltrans.

The administering agency for the above statute is Caltrans.

The Project would comply with this code by requiring that heavy haulers obtain a Single-Trip Transportation Permit for oversized loads for each vehicle, prior to delivery of any oversized load.

5.11.5.2.12 California Streets and Highways Code, Section 117

Unless otherwise specifically provided in the instrument conveying title, the acquisition by the department of any ROW over any real property for state highway purposes, includes the right of the department to issue, under Chapter 3 (commencing with Section 660), permits for the location in the ROW of any structures or fixtures necessary to telegraph, telephone, or electric power lines or of any ditches, pipes, drains, sewers, or underground structures.

The administering agency for the above statute is Caltrans.

If applicable, the Project would comply with this code by acquiring the necessary permits and approval from Caltrans with regard to use of public ROWs.

5.11.5.2.13 The California Streets and Highways Code, Sections 660, 670, 672, 1450, 1460, 1470, 1480 et seq

This policy defines highways and encroachment, requires encroachment permits for projects involving excavation in State Highways, County/City streets. This law is generally enforced at the local level.

The administering agencies for the above regulation are Caltrans and Fresno County Public Works Department.

The Project would apply for encroachment permits for any excavation in state and county roadways prior to construction.

5.11.5.2.14 California Health and Safety Code, Section 25160 et seq

This guideline addresses the safe transport of hazardous wastes, requires a manifest for hazardous waste shipments, requires a person who transports hazardous waste in a vehicle to have a valid registration issued by the Department of Toxic Substances Control (DTSC) in his or her possession while transporting the hazardous waste.

The administering agency for the above regulation is the DTSC.

The Project would comply with this law by requiring that shippers of hazardous wastes are properly licensed by the DTSC and hazardous waste transport vehicles are in compliance with DTSC requirements.

5.11.5.2.15 California Manual of Uniform Traffic Control Device

This manual requires a temporary traffic control plan be provided for “continuity of function (movement of traffic, pedestrians, bicyclists, transit operations), and access to property/utilities” during any time the normal function of a roadway is suspended.

The administering agencies for the above regulation are Caltrans and Fresno County Public Works Department. The Applicant would file a Traffic Control Plan prior to the start of construction.

5.11.5.2.16 California Department of Transportation, California Unpermitted Legal Vehicle Requirements

From Caltrans’ Division of Traffic Operations, the following is a list of requirements for legal, unpermitted vehicles to operate in California.

Vehicle Width. The maximum allowable vehicle width is 102 inches (some exceptions apply).

Vehicle Height. The maximum allowable vehicle height is 14 feet.

Vehicle Length (California Legal). The maximum allowable lengths for vehicles that can travel throughout California are as follows (some exceptions apply).

- Single vehicle length is 40 feet
- Combination length is 65 feet
- Trailer length is not specified
- Kingpin-to-rear-axle (KPRA) length is 40 feet maximum
- Doubles - 75 feet for combination of vehicles consisting of a truck tractor and two trailers, provided neither trailer length exceeds 28 feet 6 inches
- Doubles - 65 feet for combination of vehicles consisting of a truck tractor and two trailers, if one trailer length exceeds 28 feet 6 inches

Vehicle Length Surface Transportation Assistance Act (STAA). The maximum allowable lengths for vehicles that are limited to the National Network and Terminal Access routes are as follows:

- Combination length is unlimited
- Maximum trailer length is 53 feet
- KPRA is unlimited if trailer is no more than 48 feet
- KPRA is 40 feet maximum if trailer is more than 48 feet
- Doubles - unlimited length for combination of vehicles consisting of a truck tractor and two trailers, but neither trailer length can exceed 28 feet 6 inches

Vehicle Weight. The maximum allowable weights are as follows:

- Gross combination weight is 80,000 pounds
- Single-axle weight is 20,000 pounds
- Maximum weight on a tandem axle with a four-foot spread is 34,000 pounds
- Gross combination weight is 80,000 pounds
- Single-axle weight is 20,000 pounds
- Maximum weight on a tandem axle with a four-foot spread is 34,000 pounds

Exceptions. For specific exceptions and variances, refer to the CHP 889, “Vehicle Code Size and Weight Law Summary” or call the Commercial Vehicle Section of the CHP.

5.11.5.3 Local Authorities and Administering Agencies

According to the General Plan Circulation Elements of Fresno County, the following Programs and Policies of the General Plan address traffic and circulation that could be affected by construction of the proposed SJS 1&2:

5.11.5.3.1 Fresno County General Plan Circulation Element

Key roadways in Fresno County serve as vital transportation corridors within San Joaquin Valley. Passenger vehicles, motor homes, and trucks cross Fresno County en route to out-of-county and interstate destinations. In addition, rail traffic and pipelines have major routes through Fresno County.

The Fresno Council of Governments (COG) is the regional transportation agency that prepares the Regional Transportation Plan (RTP) to examine long-range transportation issues, opportunities and needs for Fresno County.

5.11.5.3.2 Fresno County General Plan, Circulation Element, Policy TR-A.2

The County shall plan and design its roadway system in a manner that strives to meet 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. Roadway improvements to increase capacity and maintain LOS standards should be planned and programmed based on consideration of the total overall needs of the roadway system, recognizing the priority of maintenance, rehabilitation, and operation of the existing road system. The County may, in programming capacity-increasing projects, allow exceptions to the level of service standards in this policy where it finds that the improvements or other measures required achieving the LOS policy are unacceptable based on established criteria. In addition to consideration of the total overall needs of the roadway system, the County shall consider the following factors:

- The right-of-way needs and the physical impacts on surrounding properties;
- Construction and right-of-way acquisition costs;
- The number of hours that the roadway would operate at conditions below the standard;
- The ability of the required improvement to significantly reduce delay and improve traffic operations; and
- Environmental impacts upon which the County may base findings to allow an exceedance of the standards.

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 COG, plan for worse than LOS E on State highways in the county.

5.11.5.3.3 Fresno County General Plan, Circulation Element, Policy TR-A.3

The County shall require that new or modified access to property abutting a roadway and to intersecting roads conform to access specifications in the Circulation Diagram and Standards section. Exceptions to the access standards may be permitted in the manner and form prescribed in the Fresno County Zoning and Subdivision Ordinances, provided that the designed safety and operational characteristics of the existing and planned roadway facility will not be substantially diminished.

5.11.5.4 *Permits Required and Permitting Schedule*

**Table 5.11-17
Applicable Permits**

Responsible Agency	Permit/Approval	Schedule
Fresno County Department of Public Works	Transportation Permit	As needed
California Department of Transportation	Transportation Permit	As needed

In addition to the transportation permits described in Table 5.11-17, encroachment permits may be required for project-related construction and operational activities within State and local facility right-of-ways.

5.11.6 **References**

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http://www.dot.ca.gov/hq/tsip/hseb/crs_maps/

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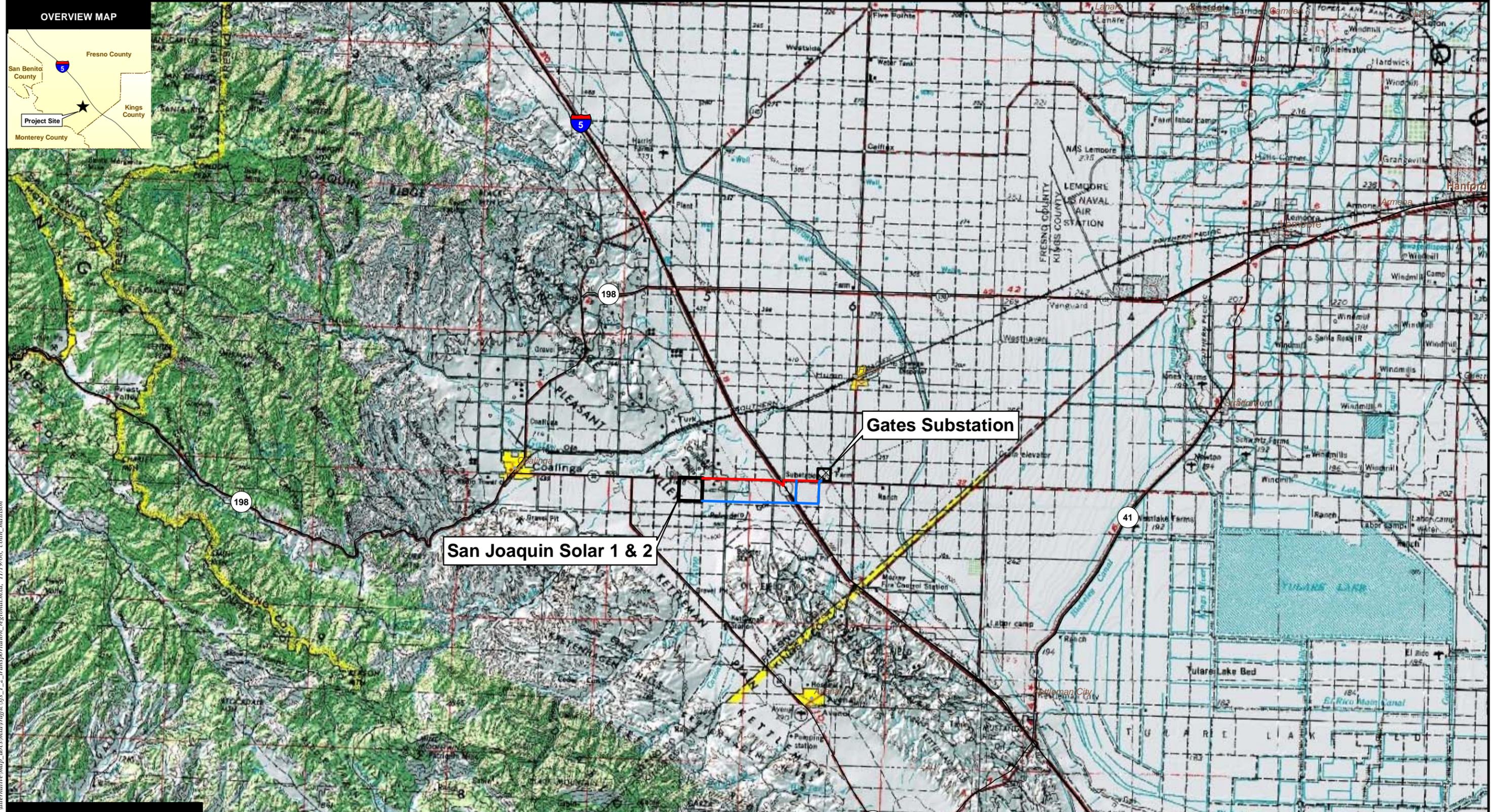
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Adequacy Issue:	Adequate	Inadequate	DATA ADEQUACY WORKSHEET		Revision No.	0	Date	
Technical Area:	Traffic and Transportation		Project:	San Joaquin Solar 1 & 2	Technical Staff:			
Project Manager:			Docket:		Technical Senior:			
SITING REGULATIONS	INFORMATION		AFC SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS			
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.		Section 5.11.1.1 through Section 5.11.1.4 Section 5.11.2.3 through Section 5.11.4.3 Section 5.11.5.1 through Section 5.11.5.4					
Appendix B (g) (5) (A)	A regional transportation setting, on topographic maps (scale of 1:250,000), identifying the project location and major transportation facilities. Include a reference to the transportation element of any applicable local or regional plan.		Figure 5.11-1					
Appendix B (g) (5) (B)	If the proposed project including any linear facility is to be located within 20,000 feet of an airport runway that is at least 3,200 feet in actual length, or 5,000 feet of a heliport (or planned or proposed airport runway or an airport runway under construction, that is the subject of a notice or proposal on file with the Federal Aviation Administration), discuss the project's compliance with the applicable sections of the current Federal Aviation Regulation Part 77 – Objects Affecting Navigable Airspace, specifically any potential to obstruct or impede air navigation generated by the project at operation; such as, a thermal plume, a visible water vapor plume, glare, electrical interference, or surface structure height. The discussion should include a map at a scale of 1:24,000 that displays the airport or airstrip runway configuration, the proposed power plant site and related facilities.		Section 5.11.1.3 Section 5.11.5.1 Figure 5.11-2					
Appendix B (g) (5) (C)	An identification, on topographic maps at a scale of 1:24,000, and a description of existing and planned roads, rail lines, (including light rail), bike trails, airports, bus routes serving the project vicinity, pipelines, and canals in the project area affected by or serving the proposed facility. For each road identified, include the following information, where applicable:		Figure 5.11-2					

Adequacy Issue:	Adequate	Inadequate	DATA ADEQUACY WORKSHEET		Revision No.	0	Date	
Technical Area:	Traffic and Transportation		Project:	San Joaquin Solar 1 & 2		Technical Staff:		
Project Manager:			Docket:			Technical Senior:		
SITING REGULATIONS	INFORMATION		AFC SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS			
Appendix B (g) (5) (C) (i)	Road classification and design capacity;		Section 5.11.1 Figure 5.11-2					
Appendix B (g) (5) (C) (ii)	Current daily average and peak traffic counts;		Section 5.11.1.4 Figure 5.11-2 Figure 5.11-4					
Appendix B (g) (5) (C) (iii)	Current and projected levels of service before project development, during construction, and during project operation;		Section 5.11.1.4 Section 5.11.2.7 through Section 5.11.2.8 Figure 5.11-2					
Appendix B (g) (5) (C) (iv)	Weight and load limitations;		Section 5.11.5.2.16					
Appendix B (g) (5) (C) (v)	Estimated percentage of current traffic flows for passenger vehicles and trucks; and		Section 5.11.1.1 Figure 5.11-2					
Appendix B (g) (5) (C) (vi)	An identification of any road features affecting public safety.		Section 5.11.1.1 through Section 5.11.1.2					
Appendix B (g) (5) (D)	An assessment of the construction and operation impacts of the proposed project on the transportation facilities identified in subsection (g)(5)(C). Also include anticipated project-specific traffic, estimated changes to daily average and peak traffic counts, levels of service, and traffic/truck mix, and the impact of construction of any facilities identified in subsection (g)(5)(C).		Section 5.11.2.7 through Section 5.11.2.8					
Appendix B (g) (5) (E)	A discussion of project-related hazardous materials to be transported to or from the project during construction and operation of the project, including the types, estimated quantities, estimated number of trips, anticipated routes, means of transportation, and any transportation hazards associated with such transport.		Section 5.11.2.3 Section 5.11.2.4 Section 5.11.5					
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and		Section 5.11.5					

Adequacy Issue:	Adequate	Inadequate	DATA ADEQUACY WORKSHEET		Revision No.	0	Date	
Technical Area:	Traffic and Transportation		Project:	San Joaquin Solar 1 & 2	Technical Staff:			
Project Manager:			Docket:		Technical Senior:			
SITING REGULATIONS	INFORMATION		AFC SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS			
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.		Section 5.11.5.5					
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.		Section 5.11.5 Table 5.11-16					
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.		Section 5.11.5.4 Table 5.11-17					



San Joaquin Solar 1 & 2

Gates Substation

LEGEND

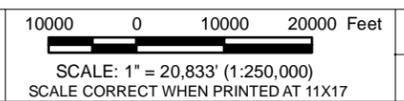
- San Joaquin Solar 1 & 2
- Gates Substation

Transmission Lines

- Northern Route
- Southern Route



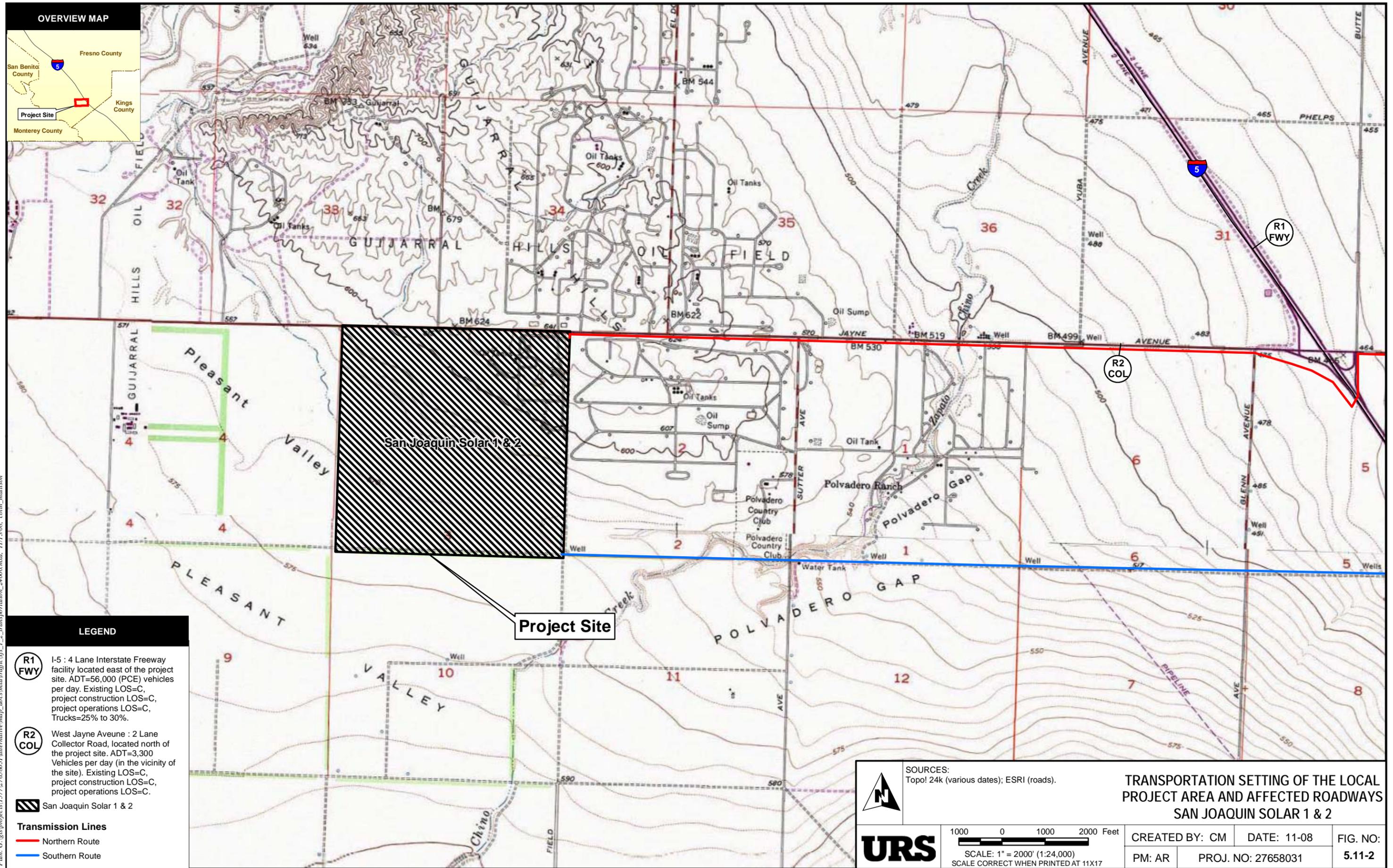
SOURCES:
Topo! 100k (various dates); ESRI (roads).



**REGIONAL TRANSPORTATION SETTING
SAN JOAQUIN SOLAR 1 & 2**

CREATED BY: CM	DATE: 11-08	FIG. NO:
PM: AR	PROJ. NO: 27658031	5.11-1

Path: G:\gis\projects\137727658031\alternative\map_docs\map\traffic\sys_1_2_transportation_regional.mxd, 11/19/08, colin_mattison



OVERVIEW MAP



LEGEND

R1 FWY I-5 : 4 Lane Interstate Freeway facility located east of the project site. ADT=56,000 (PCE) vehicles per day. Existing LOS=C, project construction LOS=C, project operations LOS=C, Trucks=25% to 30%.

R2 COL West Jayne Avenue : 2 Lane Collector Road, located north of the project site. ADT=3,300 Vehicles per day (in the vicinity of the site). Existing LOS=C, project construction LOS=C, project operations LOS=C.

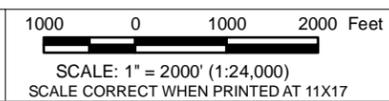
San Joaquin Solar 1 & 2

Transmission Lines

Northern Route
 Southern Route



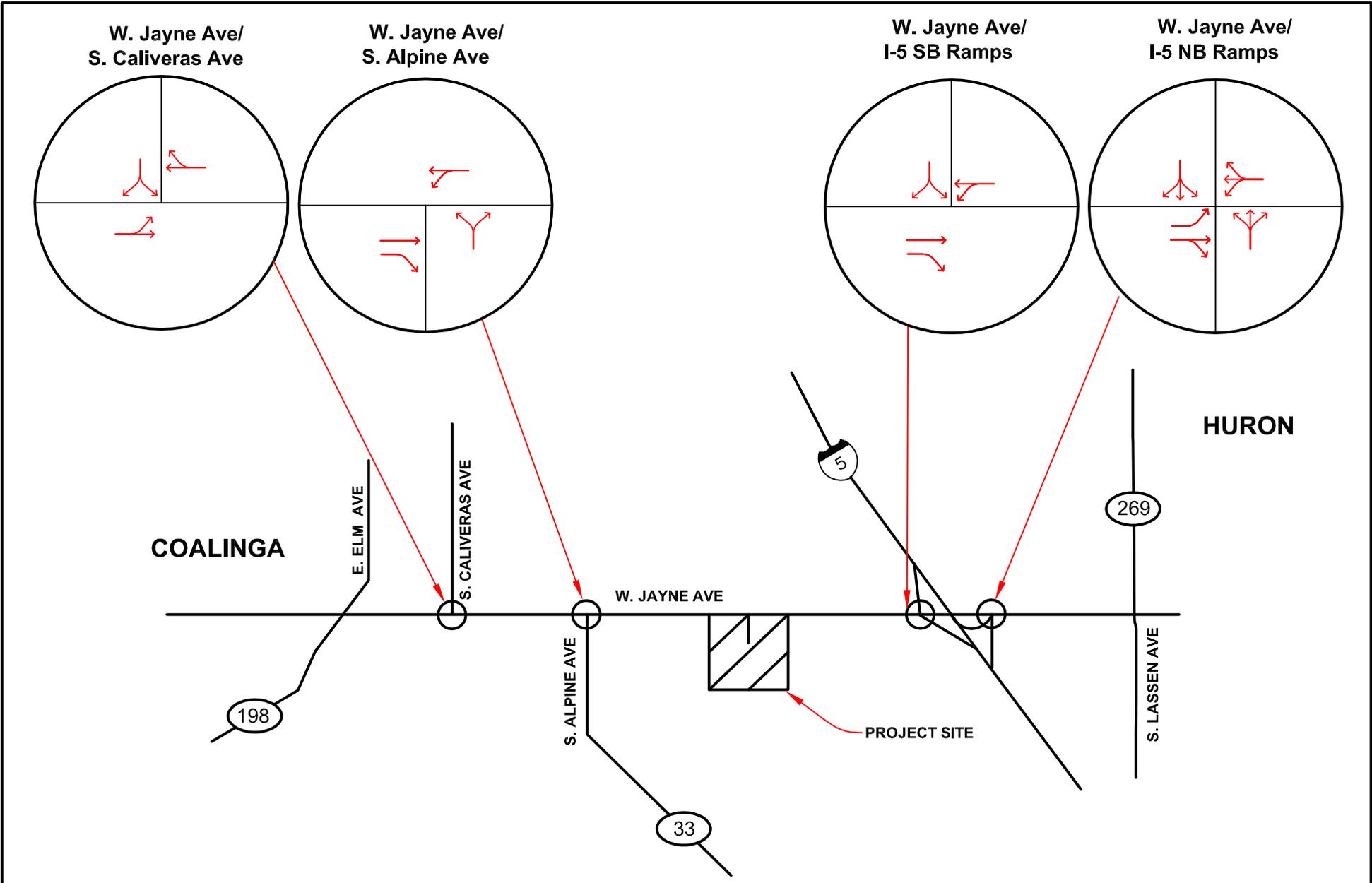
SOURCES:
 Topo! 24k (various dates); ESRI (roads).



TRANSPORTATION SETTING OF THE LOCAL PROJECT AREA AND AFFECTED ROADWAYS SAN JOAQUIN SOLAR 1 & 2

CREATED BY: CM	DATE: 11-08	FIG. NO:
PM: AR	PROJ. NO: 27658031	5.11-2

Path: G:\gis\projects\157727658031\alternative\map_docs\map\traffic\sys_1_2_transportation_24000.mxd, 11/13/08, colin_mattison



**SAN JOAQUIN SOLAR 1 & 2
EXISTING LANE CONFIGURATION**



NOT TO SCALE

CHECKED BY: VS

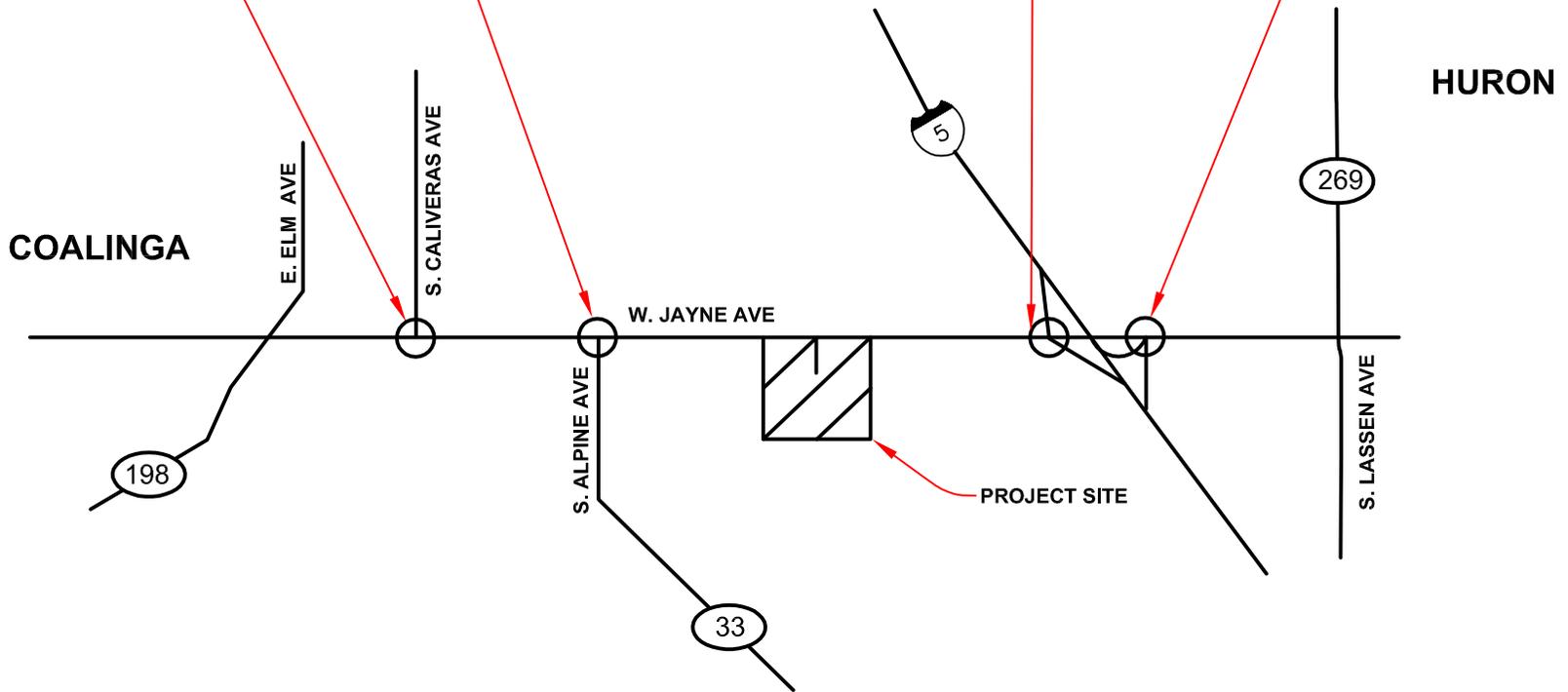
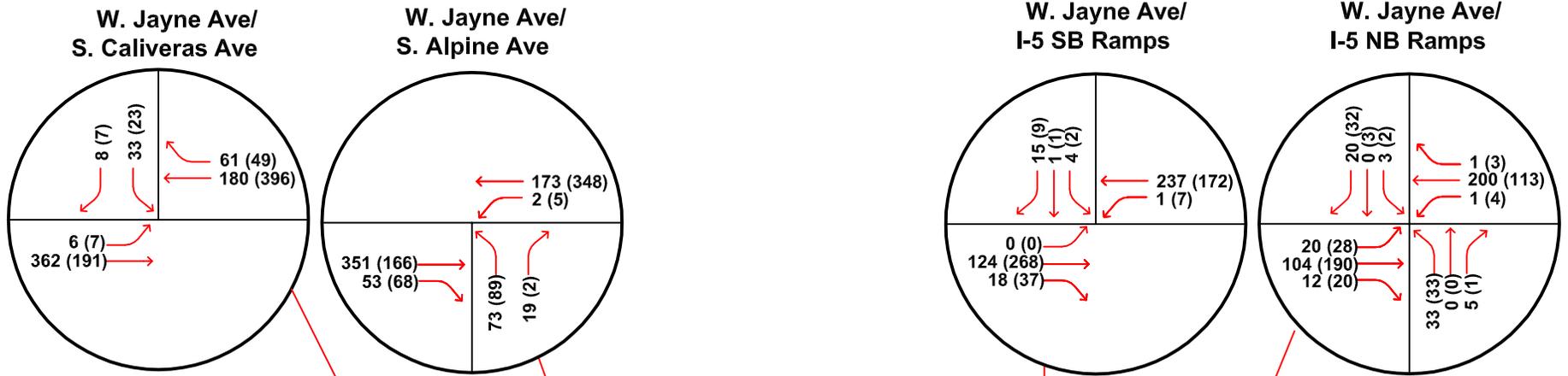
DATE: November 2008

FIG. NO:

PM: AR

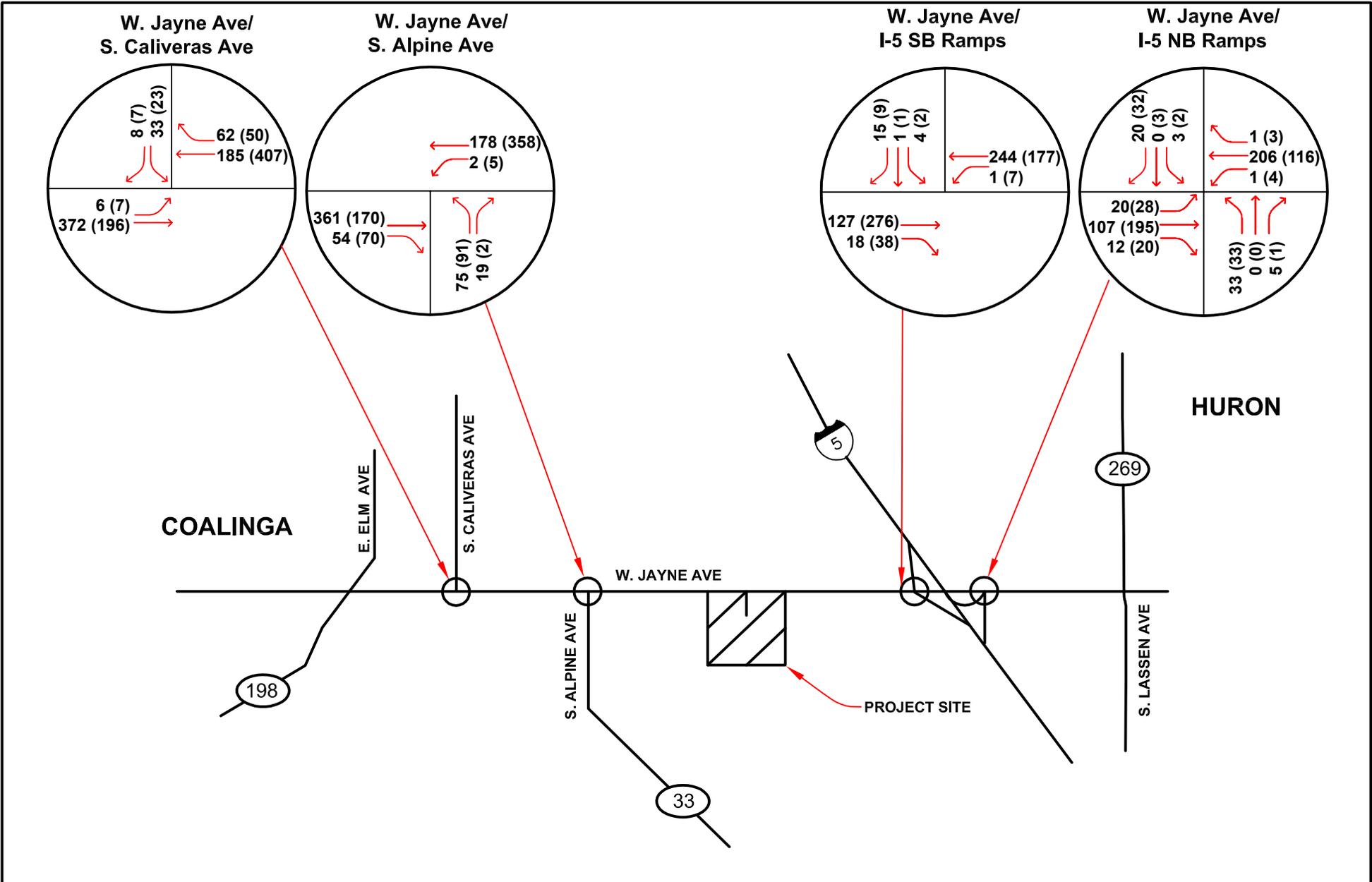
PROJ. NO: 27658031.00612

5.11-3



Legend
 00 (00) - AM (PM) Peak Hour

 	SAN JOAQUIN SOLAR 1 & 2 EXISTING TRAFFIC VOLUMES	
	NOT TO SCALE	CHECKED BY: VS PM: AR
	DATE: November 2008 PROJ. NO: 27658031.00612	FIG. NO: 5.11-4



Legend
 00 (00) - AM (PM) Peak Hour



**SAN JOAQUIN SOLAR 1 & 2
 2010 NO PROJECT TRAFFIC VOLUMES**



NOT TO SCALE

CHECKED BY: VS

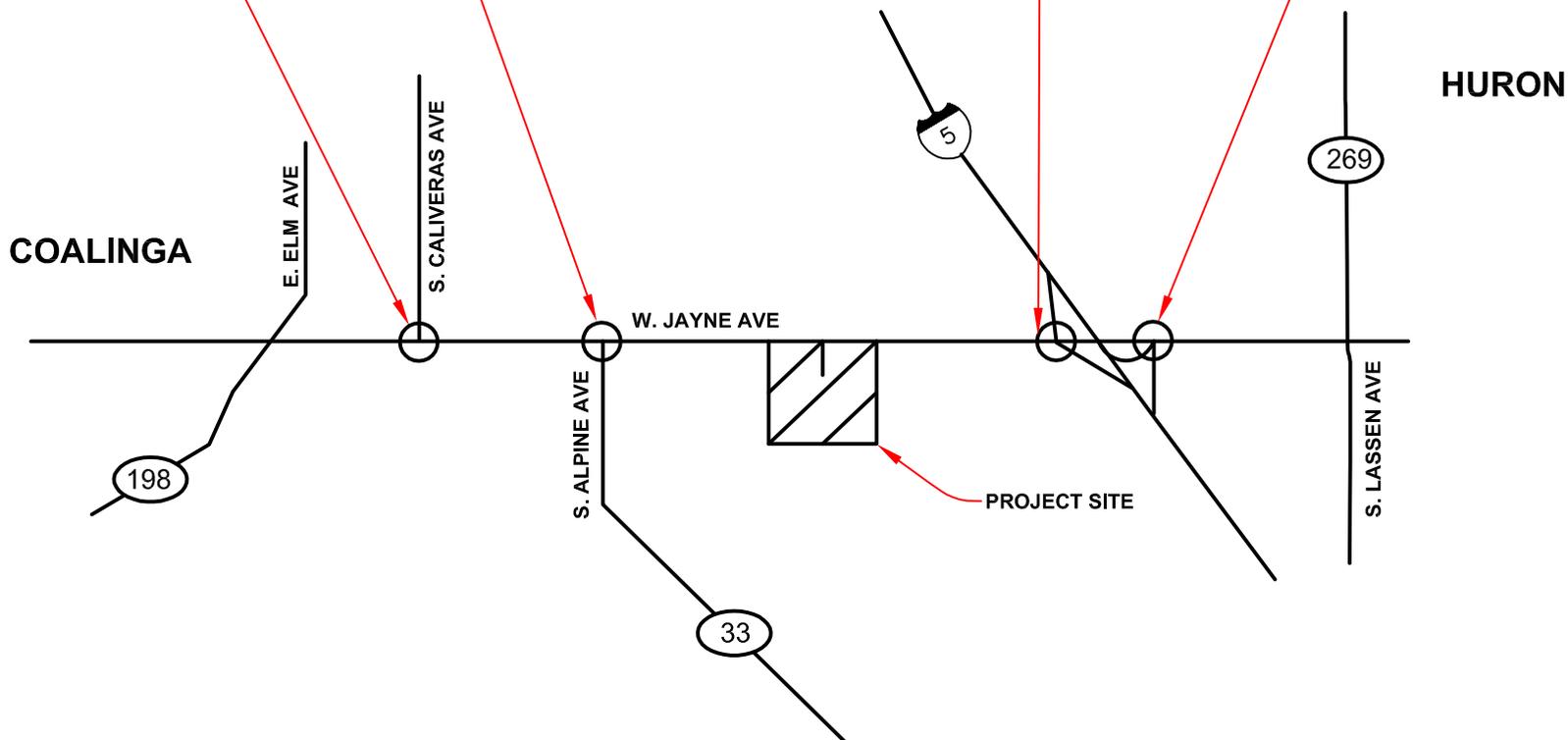
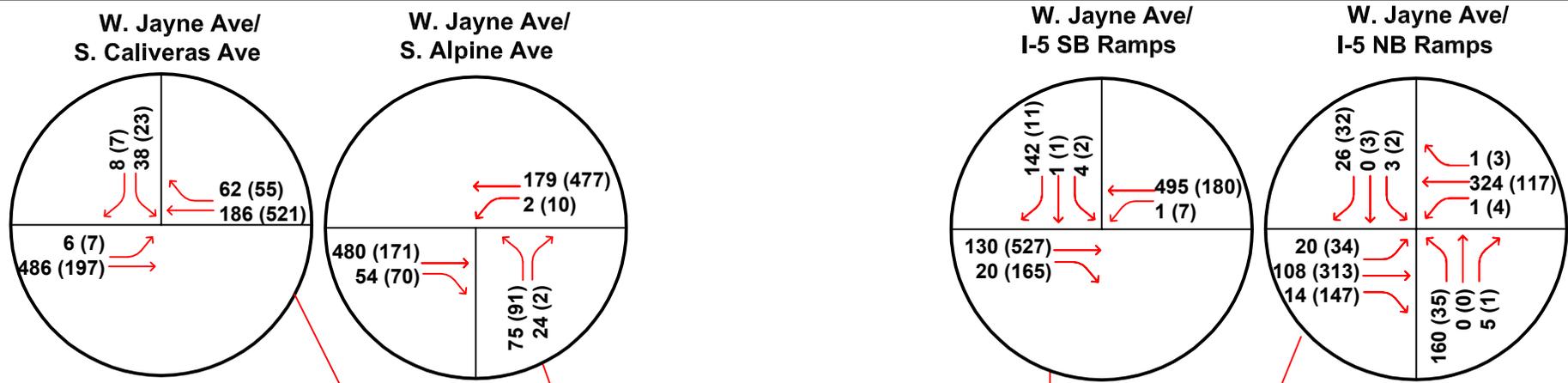
DATE: November 2008

FIG. NO:

PM: AR

PROJ. NO: 27658031.00612

5.11-5



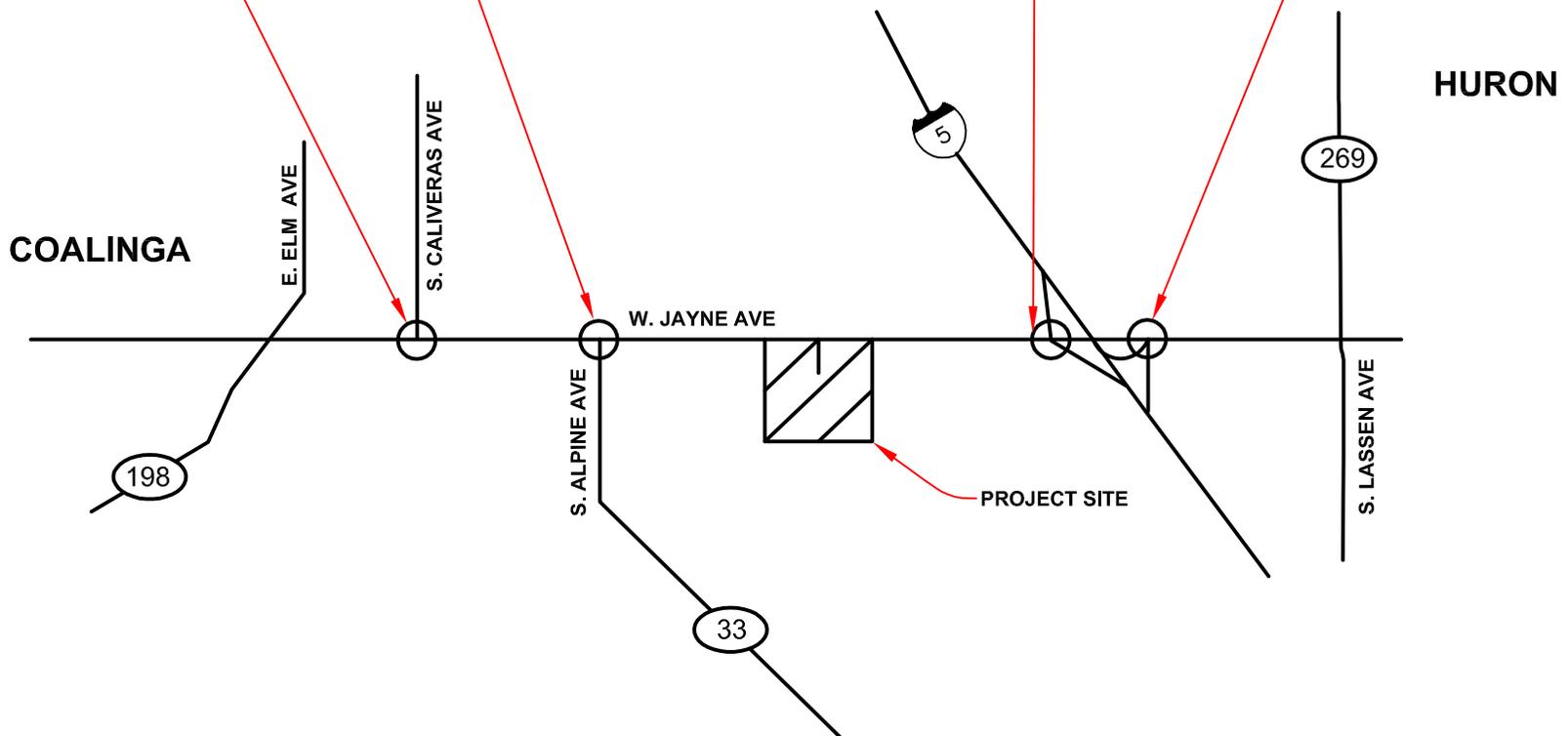
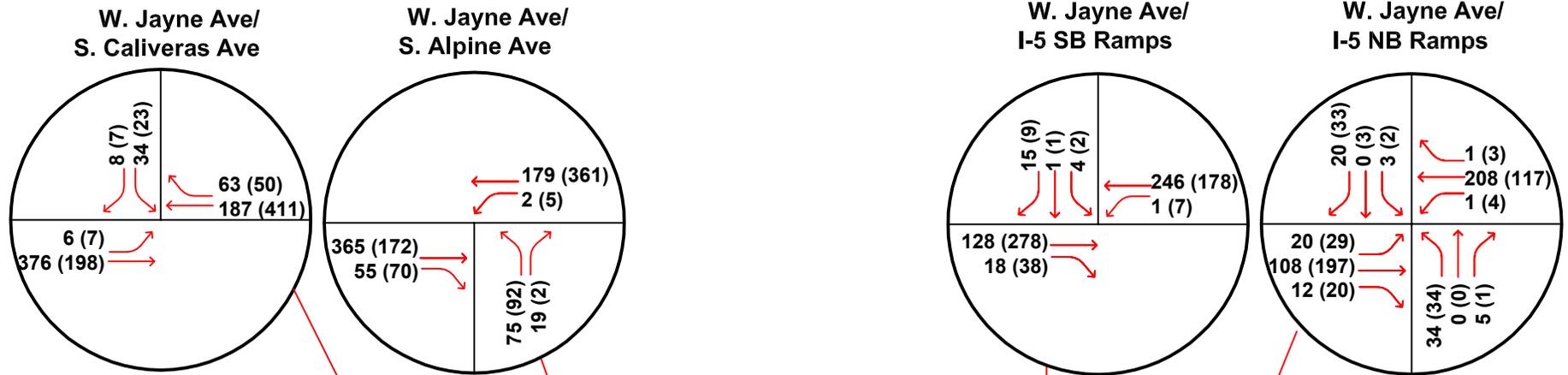
Legend
 00 (00) - AM (PM) Peak Hour



NOT TO SCALE

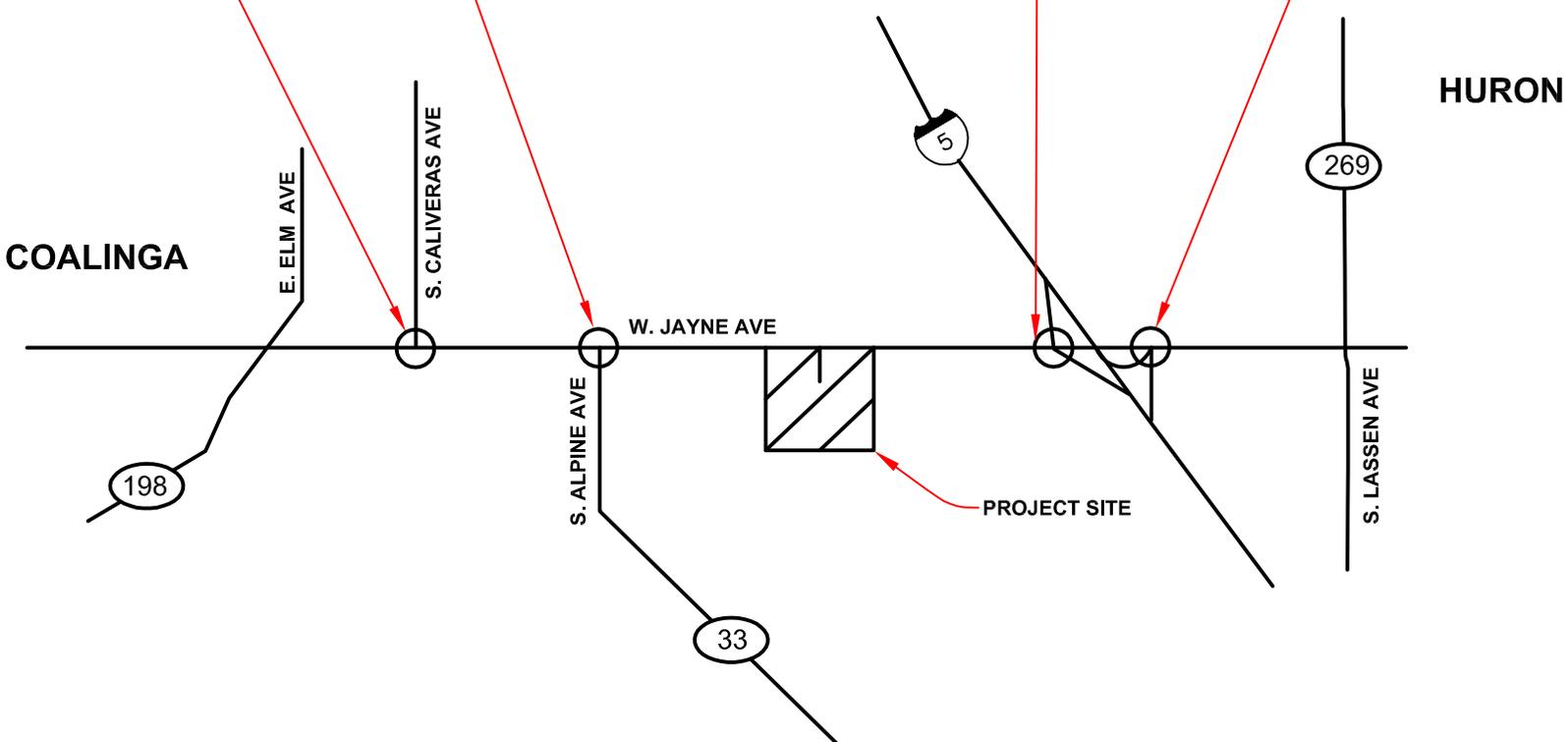
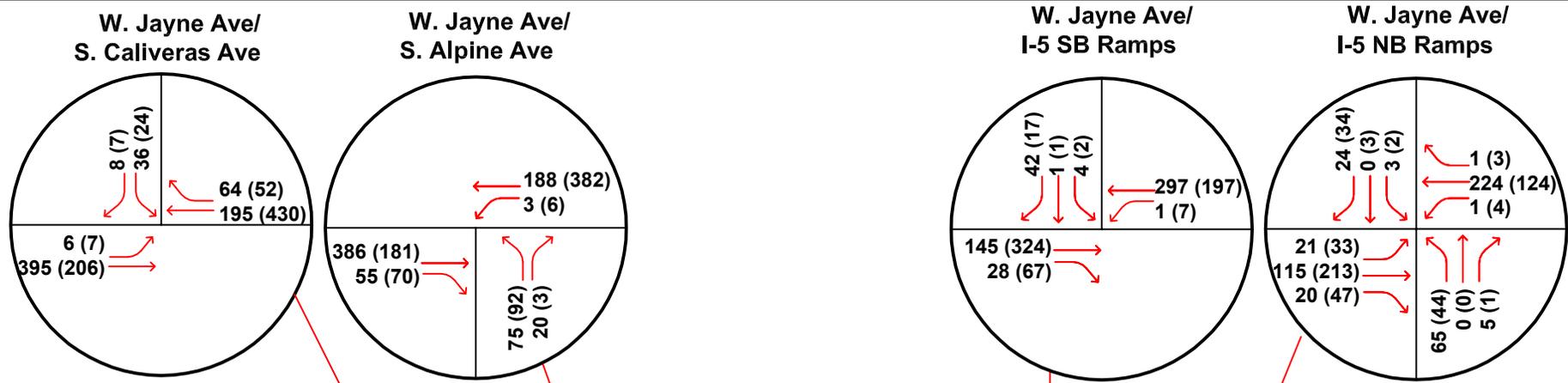
**SAN JOAQUIN SOLAR 1 & 2
 2010 NO PROJECT PLUS PROJECT CONSTRUCTION
 TRAFFIC VOLUMES**

CHECKED BY: VS	DATE: November 2008	FIG. NO: 5.11-6
PM: AR	PROJ. NO: 27658031.00612	



Legend
 00 (00) - AM (PM) Peak Hour

 	SAN JOAQUIN SOLAR 1 & 2 2011 NO PROJECT TRAFFIC VOLUMES		
	NOT TO SCALE	CHECKED BY: VS PM: AR	DATE: November 2008 PROJ. NO: 27658031.00612



Legend
 00 (00) - AM (PM) Peak Hour

 	SAN JOAQUIN SOLAR 1 & 2 2011 NO PROJECT PLUS PROJECT OPERATIONS TRAFFIC VOLUMES			FIG. NO: 5.11-8
	NOT TO SCALE	CHECKED BY: VS PM: AR	DATE: November 2008 PROJ. NO: 27658031.00612	