5.11 TRAFFIC AND TRANSPORTATION

This section assesses traffic and transportation effects associated with the construction and operation of the SES Solar Two, LLC (Solar Two or Applicant) Project and its ancillary facilities (Project). The traffic and transportation analysis primarily examines effects on roadway intersection and circulation system levels of service (LOSs) within the Project study area during construction and operation of the Project.

This section also identifies and reviews applicable laws, ordinances, regulations, and standards (LORS) relevant to traffic and transportation activities.

Information sources include data collected from the California Department of Transportation (Caltrans) traffic count database; new roadway and intersection turning movement counts collected in January 2008; field review and observations; and communications with local, regional, and federal level agencies. URS Corporation staff performed study area reconnaissance in 17 January 2008 to document baseline roadway characteristics, identify physical constraints, and assess general traffic conditions within the Project study area.

5.11.1 Affected Environment

5.11.1.1 Regional Setting

The affected environment relative to the Project is discussed in both regional and local context. The regional setting includes the existing and planned public and private roads, rail lines, and pipelines considered in the transportation effects analysis. Figure 5.11-1, Regional Transportation Setting, depicts the affected environment as discussed below and illustrates the relationship of the Project to local and major roads and highways in the Project study area. Figures 5.11-2A through 5.11-2C, Transportation Setting of the Local Project Area and Affected Roadways, depicts the location of the Project study area.

The following plans and programs describe the framework for managing the transportation resources in the Project study area.

Southern California Association of Governments Regional Transportation Plan

The Southern California Association of Governments (SCAG) is the designated Metropolitan Planning Organization for the six county SCAG Region comprising the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The SCAG is mandated by the federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. The Adopted 2004 Regional Transportation Plan, also known as Destination 2030, is a multi-modal plan representing SCAG's vision for a better transportation system, integrated with the best possible growth pattern for the region. The 2004 Regional Transportation Plan presents an assessment of the overall growth and economic trends in the SCAG region for the 2030 Planning Horizon Year and provides strategic direction for investments during this time period.

Imperial County General Plan Circulation and Scenic Highway Element

The Imperial County General Plan is the master "blueprint" for the way county residents, county officials, and planning staff would like to see Imperial County grow and develop. The Circulation and Scenic Highway Element of the County General Plan outline the goals and policies for the county's transportation and circulation system, as well as provide a policy framework in the implementation of the scenic highways program by providing protection and enhancement of the county's scenic resources for both rural and urban scenic highway corridors.

Imperial County Bicycle Master Plan

The purpose of the Imperial County Bicycle Plan is to identify a system of bicycle routes that will serve as a tool for the county in planning future bicycle facilities and roadway improvements.

Ocotillo/Nomirage Community Plan

The Ocotillo/Nomirage Community Plan identifies the goals, policies, and standards that will guide the physical growth of the township of Ocotillo and the other communities within the planning area.

5.11.1.2 Highways and Roadways

The transportation network within the Project study area is composed of a mix of interstate, county highways, and local roadways. The circulation system plays a major role in the movement of goods originating from both interstate and international sources. Local industries, such as the United States Gypsum Plant Plaster City and agricultural communities, rely on the state and county roadways for access as well recreational and tourist oriented trips on public land. This trend and use of the transportation network will continue as new developments occur within Imperial County as well as the surrounding communities.

As illustrated on Figure 5.11-1, Regional Transportation Setting, the Project study area is primarily served by Interstate 8 to the south which connects San Diego County from the west and Arizona to the east and beyond to the continental United States via its terminus at Interstate 10.

Existing roadways serving the Project area are relatively straight and the terrain is flat to moderate with adequate sight distance for opposite traffic. No sharp curves or steep grades exist on the street network surrounding the Project Site.

Regional Roadway Facilities

Interstate 8

Interstate 8 (I-8) is an east-west interstate freeway located south of the Project Site. It originates from the west at San Diego and terminates to the east at I-10 in Arizona. It acts as a major east-west regional connector roadway for commuters from El Centro, Imperial, Ocotillo, and other small towns located in Imperial County in the vicinity of the I-8 corridor. Most of the traffic generated by the Project is expected to use I-8 as their major access road. I-8 has four through lanes (two through lanes in each direction) with 6 feet of shoulder on both sides. It is posted at 65 miles per hour (mph) in the vicinity of the site. Access to the Project from I-8 will be provided via existing freeway ramp connections at Imperial Highway and Dunaway Road.

State Route 98

State Route 98 (SR 98) is an east-west state highway facility located south of and running parallel to I-8. SR 98 starts from an interchange on I-8 just west of Imperial Highway and ends at an interchange on I-8 east of El Centro where it also connects with Evan Hewes Highway. SR 98 runs parallel to I-8 and provides access to the town of Calexico. SR 98 has two through lanes (one in each direction) and is posted at 65 mph in the vicinity of the Imperial Highway. The intersection of SR 98 and Imperial Highway is currently controlled by a stop sign on Imperial Highway.

Local Roadway Facilities

The primary east-west roadway that provides access to and from the Project Site is Evan Hewes Highway located north of the Project. A major north-south roadway located in the vicinity of the site is Imperial Highway and Dunaway Road. Local roadway characteristics are briefly described below. Figure 5.11-1, Regional Transportation Setting, shows the roadway circulation network and study intersection lane configurations in the Project vicinity.

Evan Hewes Highway

The Evan Hewes Highway (also known as County Highway S 80) is an east-west, two-lane primary road to the north of the Project Site. It starts near the interchange of I-8 and United States Highway 98 (US 98) on the west and terminates at Coachella Canal Road east of El Centro. Evan Hewes Highway generally parallels I-8 and provides local access via the I-8 freeway interchanges at Imperial Highway and Dunaway Road. It has two through lanes (one in each direction). The posted speed limit is 55 mph in the vicinity of Dunaway Road.

Imperial Highway

Imperial Highway is a two-lane, north-south roadway located west of the Project Site. Imperial Highway starts at US 98 on the south and continues to the north past Ocotillo. Imperial Highway intersects with Evan Hewes Highway and operates as an unsignalized intersection with stop signs on Evan Hewes Highway. Imperial Highway is the major access road for the Town of Ocotillo to reach I-8. It has two through lanes (one in each direction) and is posted at 35 mph in the vicinity of I-8. The eastbound and westbound I-8 ramp intersections with Imperial Highway are currently unsignalized and controlled by stop signs on the I-8 ramps.

Dunaway Road

Dunaway Road is a two-lane, north-south roadway to the east of the Project Site. It starts from Evan Hewes Highway on the north and terminates approximately 500 feet south of I-8 as a cul-de-sac. Dunaway Road has two through lanes (one in each direction) with a posted speed limit of 55 mph. One full movement access road is planned from Dunaway Road for the proposed development. The intersection of Evan Hewes Highway and Dunaway Road is currently unsignalized with a stop sign on Dunaway Road. The eastbound and westbound I-8 ramp intersections with Dunaway Road are currently unsignalized and controlled by stop signs.

5.11.1.3 Railroads

A railroad line travels along the northern Project Site boundary. The railroad segment to the east of Plaster City is owned by Union Pacific (UP) while the railroad segment west of Plaster City is owned by Carrizo Gorge Railway. Two rail crossings located in the vicinity of the Project are described below.

Rail Crossing on Dunaway Road

An east-west, at-grade train crossing is located on Dunaway Road approximately 600 feet south of the Evan Hewes Highway. The crossing is controlled by a traffic signal and mechanical gate. Vehicles are warned with a flashing red light of approaching trains. This section of the railroad is owned and operated by UP.

Rail Crossing on Imperial Highway

An east-west, at-grade train crossing is located on Imperial Highway approximately 400 feet north of US 98. The crossing is controlled by a traffic signal and mechanical gate. Vehicles are warned with a flashing red light of approaching trains. This section of the railroad is owned and operated by Carrizo Gorge Railway.

5.11.1.4 Pipelines

Construction of a proposed 4-inch water supply pipeline is planned to support the Project Site.

5.11.1.5 Bicycle Routes and Pedestrian Circulation

According to the Imperial County Bicycle Master Plan, all new bikeways should meet or exceed the Caltrans guidelines as described in Chapter 1000, Bikeway Planning and Design of the Caltrans Design Manual. The County has adopted the Caltrans bicycle classification system listed below.

- Class I Bicycle “Paths” are completely separated from vehicular traffic and within an independent right-of-way (ROW) or the ROW of another facility.
- Class II Bicycle “Lanes” are part of the roadway or shoulder marked by pavement markings or barriers. Vehicle parking, crossing, or turning movements are permitted within the bikeway.

- Class III Bicycle "Routes" share the ROW with motor vehicles and are designated by signage only. There is minimal protection from shared vehicle traffic, but signage helps to make the motorist aware of bicyclists.

The County bicycle facilities are described in greater detail in the Imperial County Bicycle Master Plan. The traffic and circulation review found no bicycle amenities within the immediate vicinity of the Project study area.

Pedestrian circulation networks are mainly associated with existing roads that have sidewalks. In the absence of curbs, gutters, or sidewalks, pedestrian circulation and local foot traffic generally use the ROW easements along the edges of paved streets. The traffic and circulation review found no pedestrian activity within the immediate vicinity of the Project study area.

5.11.1.6 Airports

The following lists airports identified near the Project Site, and includes their approximate distances in relation to it:

- Naval Air Facility El Centro – approximately 7 miles or 36,960 feet northeast of the Project Site,
- Imperial County Airport – approximately 14 miles or 73,920 feet northeast of the Project Site, and
- Calixeco Airport – approximately 18 miles or 95,040 feet southeast of the Project Site.

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

5.11.1.7 Level of Service Concept

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.

Table 5.11-1, Level of Service Designations for Signalized and Unsignalized Intersections, describes the LOS performance designations for signalized and unsignalized intersections.

Table 5.11-1
Level of Service Designations for Signalized and Unsignalized Intersections

Description of Operation	Signalized Intersection Delay (seconds per vehicle)	Stop-Controlled Intersection Delay (seconds per vehicle)
LOS A describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	<10.0	<10.0
LOS B describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	10.1 – 20.0	10.1 – 15.0
LOS C describes operations with higher delays, which may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	20.1 – 35.0	15.1 – 25.0
LOS D describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable.	35.1 – 55.0	25.1 – 35.0
LOS E is considered the limit of acceptable delay. Individual cycle failures are frequent occurrences.	55.1 – 80.0	35.1 – 50.0
LOS F describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the LOS D capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay.	>80.0	>50.0

Source: Transportation Research Board, 2000.

Notes:
< = less than
> = greater than
LOS = level of service

Table 5.11-2, Freeway Level of Service Designations, shows the LOS performance designations for freeway segments. It must be noted that Caltrans does not have a freeway segment analysis procedure to evaluate freeway segments based on average daily traffic (ADT). An alternative procedure, the Florida Department of Transportation LOS tables (referred to as Modified Highway Capacity Manual LOS Tables), shown below, were developed specifically for analyzing highway segments and have been used extensively in California to evaluate freeway segments. Table 5.11-2, Freeway Level of Service Designations, shows the desired maximum two-way ADT values and the corresponding freeway LOS.

Table 5.11-2
Freeway Level of Service Designations

Roadway Classification	Number of Lanes	LOS A (vehicles/day)	LOS B (vehicles/day)	LOS C (vehicles/day)	LOS D (vehicles/day)	LOS E (vehicles/day)
Freeway	4	21,400	33,700	50,500	64,300	76,500
Freeway	6	32,900	51,700	77,600	98,700	117,500
Freeway	8	44,900	70,600	105,900	134,800	160,500
Freeway	10	56,200	88,300	132,400	168,500	200,600

Source: Florida Department of Transportation, 2002, updated 2003.

Note:
LOS = level of service

Table 5.11-3, Imperial County Standard Street Classifications Level of Service Designations, shows the Imperial County Standard Street Classifications and estimated LOS for each roadway classification.

Table 5.11-3
Imperial County Standard Street Classifications
Level of Service Designations

Road		Level of Service				
Class	Cross-section	A (vehicles/ day)	B (vehicles/ day)	C (vehicles/ day)	D (vehicles/ day)	E (vehicles/ day)
Prime arterial	106 to 126 feet	22,200	37,000	44,600	50,000	57,000
Major arterial	82 to 102 feet	14,800	24,700	29,600	33,400	37,000
Secondary arterial	64 to 84 feet	13,700	22,800	27,400	30,800	34,200
Collector street	40 to 70 feet	1,900	4,100	7,100	10,900	16,200
Local street	40 to 60 feet	[1]	[1]	4,500	[1]	[1]
Residential street	40 to 60 feet	[1]	[1]	1,500	[1]	[1]
Residential cul-de-sac or loop street	40 to 60 feet	[1]	[1]	200	[1]	[1]

Source: Imperial County, 2006a.

Note:
[1] Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

5.11.1.8 Existing Traffic Conditions

As mentioned earlier, the Project will be located on the northwest quadrant of I-8 and Dunaway Road in Imperial County, California. The regional vicinity map of the Project within the surrounding region is depicted on Figure 5.11-1, Regional Transportation Setting. The Project location, including major roads, local streets, and highways in the immediate vicinity of the Project are illustrated on Figures 5.11-2A through 5.11-2C, Transportation Setting of the Local Project Area and Affected Roadways. The existing geometric configuration of roadway segments and intersections in the vicinity of the Project Site are shown on Figure 5.11-3, Existing Intersection Geometrics. The existing traffic volumes in the vicinity of the Project are

shown on Figure 5.11-4, Existing Traffic Volumes (AM/PM Peak Hour). The existing traffic volumes are based on traffic counts conducted by National Data Services in January 2008. The roadway segment and intersection turning movement counts are included in Appendix BB, Traffic Counts.

Existing Roadway Level of Service

As shown in Table 5.11-4, Existing Roadway Level of Service, all traffic study roadway segments currently operate at LOS A under existing conditions.

Table 5.11-4
Existing Roadway Level of Service

Roadway	Location	Classification	ADT (vehicles/day)	Truck Percent of ADT	LOS
I-8	West of Imperial Highway	Freeway	15,300[1]	14[3]	A[5]
I-8	East of Dunaway Road	Freeway	13,400[1]	17[3]	A[5]
US 98	West of Imperial Highway	State Highway	1,500[2]	7[3]	A[5]
Imperial Highway	North of US 98	Collector	315[2]	--	A[6]
Evan Hewes Highway	East of Imperial Highway	Collector	1,250[2]	--	A[6]
Evan Hewes Highway	West of Dunaway Road	Collector	515[2]	29[4]	A[6]
Dunaway Road	North of I-8 westbound ramps	Collector	780[2]	19[4]	A[6]

Source: URS Corporation, 2008.

Notes:
[1]Source: 2006 Traffic Volumes (Caltrans, 2008a).
[2]Source: 24-hour ADT Counts (National Data Services, 2008a).
[3]Source: 2005 Truck Volumes (Caltrans, 2008b).
[4]Source: Truck percent was estimated based on the existing daily traffic counts and information (for daily truck trips) obtained from the United States Gypsum Plant (located on Evan Hewes Highway west of Dunaway Road).
[5]LOS is based on Table 5.11-2, Freeway Level of Service Designations.
[6]LOS is based on Table 5.11-3, Imperial County Standard Street Classifications Level of Service Designations.

-- = not available
ADT = average daily traffic
I-8 = Interstate 8
LOS = level of service
US = United States Highway

Existing Intersection Level of Service

Table 5.11-5, Existing Intersection Level of Service, presents peak hour intersection LOS and average vehicle delay results under existing conditions. The LOS calculation worksheets are provided in Appendix BB, Traffic Counts. Figure 5.11-4, Existing Traffic Volumes (AM/PM Peak Hour), shows existing morning and evening peak hour turning movement volumes at each study area intersection.

Table 5.11-5
Existing Intersection Level of Service

Intersection	Morning Peak Hour		Evening Peak Hour	
	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
I-8 WB ramp/Imperial Highway	1.7	A	3.3	A
I-8 EB ramp/Imperial Highway	5.6	A	3.3	A
US 98/Imperial Highway	0.7	A	0.8	A
I-8 WB ramp/Dunaway Road	2.5	A	1.9	A
I-8 EB ramp/Dunaway Road	6.9	A	7.4	A

Source: URS Corporation, 2008.

Notes:
EB = eastbound
I-8 = Interstate 8
LOS = level of service
sec = seconds
US = United States Highway
veh = vehicle
WB = westbound

As shown in Table 5.11-5, Existing Intersection Level of Service, all traffic study intersections currently operate at LOS A under existing conditions.

5.11.2 Environmental Consequences

5.11.2.1 Significance Criteria

According to the guidelines established in California Energy Commission Staff Application for Certification Instructions and those set forth in California Environmental Quality Act, Appendix G (1), (Public Resources Code Section 21000 *et seq*.), a project would result in a significant effect when it will "cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system," or when it:

- generates substantial additional vehicular movement,
- affects existing parking facilities or promotes demand for new parking facilities,
- substantially affects existing transportation systems,
- alters present patterns of circulation or the movement of people and/or goods,
- alters waterborne, rail, or air traffic, and
- increases traffic hazards to motor vehicles, bicyclists, or pedestrians.

Significant effects would also include the failure to comply with federal and state regulations governing the transportation of hazardous materials, or the generation of traffic volumes violating local LOS standards.

State Highway Level of Service Standard

Based on the Caltrans Guide for the Preparation of Traffic Impact Studies, "Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on State Highway Facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing LOS should be maintained."

Based on the above requirements the conditions below apply in the determination of significant state highway effects.

- The desired LOS is LOS D or better.
- A significant effect occurs when no action/pre-project (Base) LOS A, B, C, and D becomes LOS E or F with the Project.
- A significant effect occurs when no action/pre-project (Base) LOS E becomes LOS F with the Project.

County Facilities Level of Service Standard

The LOS criteria for the local circulation system are defined by the Imperial County General Plan Circulation and Scenic Highway Element and have set a standard of LOS C. Consequently, LOSs A, B, and C are considered acceptable, while D, E, and F are unacceptable. It must be noted that the circulation element policy acknowledges that the aforementioned LOS standards may not be obtainable on some existing facilities where abutting development precludes the acquisition of additional ROW needed for changes in facility classification.

5.11.2.2 Project Description

The Project will be located in Imperial County, 14 miles west of El Centro, California, on public land administered by the Bureau of Land Management (BLM), El Centro Field Office. The following sections describe the Project and its ancillary systems. The Solar Two Project will be owned and operated by Solar Two. It will consist of approximately 30,000 solar concentrator dishes and associated infrastructure. The Solar Two Project will produce a nominal 750 megawatts of peaking power for San Diego Gas & Electric Company's customers. Power output from this facility will be sold in accordance with a 20-year power purchase agreement to San Diego Gas & Electric Company, a subsidiary of Sempra.

The Project will be located near Plaster City, California, on BLM-administered public lands generally bounded:

- on the east by the easterly section line of Section 14 in Township 16 South, Range 11 East located 0.25 mile to the east of Dunaway Road,
- on the south by I-8,
- on the west by the mid-section line in Section 22 in Township 16 South, Range 10 East, and
- on the north by the UP Railroad ROW, located south of Evan Hewes Highway.

Project access will be provided via access roads from Dunaway Road and Evan Hewes Highway. During Project construction, the majority of construction traffic will enter the site through the east-west access road from Dunaway Road then west into the Project Site and exit through the proposed north-south access road to Evan Hewes Highway. During Project operations, site access, will be primarily via the north-south access road to Evan Hewes Highway. The proposed access road from the Dunaway Road becomes the secondary access road.

Project Construction Trip Generation

During the 40-month Project construction schedule, the Project study area will experience short-term increases in traffic associated primarily with construction worker commute and material and equipment delivery trips. The traffic analysis evaluated the worst-case Project construction scenario by analyzing the peak month where the combined trip total between worker commute and material and equipment delivery trips is highest.

Construction Workers

The construction trade projections provided by the Project design engineer estimated that, during the peak construction month (Month 7), there will be 731 workers on-site working on a daily basis. To evaluate the worst-case scenario, the traffic analysis assumed no workers would carpool and all workers would arrive during the morning peak period (0700 to 0900) and depart during the evening peak period (1600 to 1800).

Construction Equipment and Material Deliveries

The construction equipment and material delivery projections provided by the Project design engineer estimated that during the peak construction month (Month 7), there will be 1,099 truck trips per month. These trips were subsequently converted into passenger car equivalent (PCE) trips at 3 PCE per truck. No acutely hazardous materials would be delivered to or used by the Project. Most deliveries will occur between 0700 and 1700 on weekdays. Because truck deliveries will likely arrive and depart throughout the day, 30 percent of the total daily truck trips were conservatively assumed to occur during the morning and evening peak hours.

The Project construction trip generation data in Table 5.11-6, Project Construction Trip Generation, show the resultant trips that would be generated by construction personnel and delivery trucks.

Table 5.11-6
Project Construction Trip Generation

Vehicle Type	Peak Daily Round Trips	Morning Peak Trips			Evening Peak Trips		
		Inbound	Outbound	Total	Inbound	Outbound	Total
Construction worker vehicles[1]	1,462	731	0	731	0	731	**731**
Truck deliveries[2]	274	41	0	41	0	41	**41**

Source: SES Solar Two, LLC, 2008.

Notes:
[1]Peak workforce was conservatively analyzed at 731 worker trips conservatively assumed to drive alone during both the morning (0700 to 0900) and evening (1600 to 1800) peak hours.
[2]Trucks deliveries shown in the table were adjusted into PCE vehicles (3 PCE per month). 1,099 truck trips per month = 3,297 PCEs divided by 24 working days = 137 PCE one-way trips or 274 round trips per day on average. It was also assumed that 30 percent of the truck delivery trips arrive during the morning peak hour and leave during the evening peak hour while the remaining deliveries (70 percent) would arrive and leave during off-peak hours.
PCE = passenger car equivalent

Project Operations Trip Generation

During Project operations, the Project study area will experience increases in traffic associated primarily with operation worker commute and operation and maintenance (O&M) trips. Some visitor trips were also assumed for a proposed visitor center that could potentially be built on-site. The traffic analysis evaluated the worst-case Project operations scenario by accounting for both planned (operations and delivery) and future visitor trips within the Project study area.

Operations

The operational workforce projections provided by the Project design engineer estimated that by Year 7 of Project operations, up to 164 workers will be working on-site on a daily basis. The estimated vehicle requirements for operational workers include 100 cars and 4 van pool vehicles. The operational projections also included 8 daily visitor trips for sales, deliveries, and other services. To evaluate the worst-case scenario, these vehicle trips were assumed to arrive during the morning peak period (0700 to 0900) and depart during the evening peak period (1600 to 1800).

Deliveries

To sustain and support Project operations, five weekly delivery trips of hydrogen, O&M supplies, waste management, and hazardous waste handling are anticipated at the Project Site. In addition, one weekly tractor trailer trip is anticipated for spare parts, building supplies, and temporary rental equipments. It is estimated that there will be an average of 12 truck round trips or 36 PCE operational delivery round trips on a daily basis accessing the Project Site during operations. Delivery trips will likely arrive and depart throughout the day. The analysis assumed the worst-case scenario: that these trips occur on the same day.

Project Site Visits

The Project trip generation data in Table 5.11-7, Project Operations Trip Generation, show the resultant trips that would be generated by operations, deliveries, and Project Site trips.

Table 5.11-7
Project Operations Trip Generation

Vehicle Type	Peak Daily Round Trips[1]	Morning Peak Trips			Evening Peak Trips		
		Inbound	Outbound	Total	Inbound	Outbound	Total
Operations	224	112	0	**112**	0	112	**112**
Deliveries[2]	36	9	5	**14**	0	4	**4**
Visitor Center	20	5	5	**10**	5	5	**10**

Source: SES Solar Two, LLC, 2008; URS Corporation, 2008.

Notes:
[1]Peak workforce was conservatively analyzed at 731 worker trips conservatively assumed to drive alone during both the morning (0700 to 0900) and evening (1600 to 1800) peak hours.
[2]Trucks deliveries shown in the table were adjusted into PCE vehicles (3 PCE per month).
PCE = passenger car equivalent

Project Trip Distribution

Trip Distribution and Assignment

It is assumed that workers will come from Imperial and adjoining counties. As shown in Table 5.11-8, Workforce Distribution, it is anticipated that the construction and operation workforces will be originating from the following geographical areas:

- Imperial County,
- San Diego County, and
- Riverside County.

Table 5.11-8
Workforce Distribution

Origin of Workforce Vehicle Travel to Project Site	Construction Workforce	Operation Workforce
I-8 East (Imperial County)	60.0%	65.0%
I-8 East (outside of Imperial County)	5.0%	1.0%
Evan Hewes Highway east (local)	15.0%	23.0%
I-8 West (Imperial County)	5.0%	5.0%
I-8 West (outside of Imperial County)	10.0%	5.0%
Evan Hewes Highway west (Local)	5.0%	1.0%
Totals	**100.0%**	**100.0%**

Source: SES Solar Two, LLC, 2008; URS Corporation, 2008.

Notes:
% = percent
I-8 = Interstate 8

It is assumed that the most logical traffic route preferred by construction employee commuting from within Imperial and San Diego counties will be primarily via I-8 to Dunaway Road. Local workers would most likely use Evan Hewes Highway. Trips originating from the north will primarily access the site via Imperial Highway and Evan Hewes Highway to Dunaway Road.

It is anticipated that the truck deliveries would be routed via I-8 to Dunaway Road. Truck traffic will be advised not to use local streets.

5.11.2.3 Planned Roadway and Circulations Improvements

Based on information provided by Caltrans staff, at this time and during the course of the Project construction, there are no applicable roadway and circulation improvements to be considered for inclusion in the traffic analysis scenarios conducted for this Project.

5.11.2.4 Future Baseline Traffic Projections

The Year 2010 has been selected as the peak construction period for the Project. The Project construction trips are anticipated to reach their peak during this time. The Year 2017 has been selected as the Project build-out condition. The Year 2017 will be the year for evaluating effects of the Project O&M trips. During the Years 2010 and 2017, No Project traffic conditions (shown on Figure 5.11-5, Year 2010 No Project Traffic Volumes, and Figure 5.11-7, Year 2017 No Project Traffic Volumes) were derived by applying a 2 percent annual growth rate per year to the existing traffic volumes, as recommended and approved by the Imperial County Traffic Engineer.

In addition, traffic expected to be generated by the proposed *Desert Springs Development* (located north of Evan Hewes Highway) was added to the Year 2017 No Project traffic volumes. This cumulative projection was recommended and approved for inclusion by Imperial County Planning Staff.

5.11.2.5 Project Effects

Construction of the Project will result in a temporary increase in traffic associated with the movement of construction vehicles, equipment, and personnel on the transportation network serving the Project study area. Where warranted, the Project will utilize proper signs and traffic control measures in accordance with Caltrans and Imperial County during the construction period. The Project will also coordinate construction activities with appropriate Caltrans, California Highway Patrol (CHP) and Imperial County departments, and other jurisdictions to maintain traffic flow and safety, including the transport of oversized and overweight loads on state and county roadways.

Operation of the Project will result in the addition of traffic associated with employees and movement of vehicles serving the Project; these trips, however, would be minimal as compared to the construction activity traffic. Both construction and O&M are discussed in detail below as they relate to potential traffic and transportation effects in the Project study area.

Project Construction Effects

Construction of the Project will occur over an estimated 40-month period with varying levels of manpower, construction delivery, and equipment use. The majority of Project construction activities are anticipated to occur during normal daytime work hours. Possible exceptions may include limited night construction activities which are considered time critical or continuous in nature (such as concrete pours), and that may require extension of work hours based on inherent process requirements or material driven characteristics. These nighttime construction activities are considered nonrecurring events that would generate a minimal number of trips, retain a small number of workers on-site, and would likely have minimal effect on evening peak hour traffic. Therefore, nighttime work is anticipated to be a non-critical trip generation factor in the Project construction phase, with no significant effects.

During the Project construction, small quantities of hazardous materials will be delivered and construction waste products will be hauled to and from the Project Site. A more detailed discussion on Project waste management and handling of hazardous materials is presented in Section 5.14, Waste Management, and Section 5.15, Hazardous Materials Handling, respectively. All applicable LORS will be observed during the course of Project construction.

Roadway Level of Service During Project Construction

Table 5.11-9, Roadway Level of Service – Year 2010 No Project Conditions, shows the roadway LOS for Year 2010 No Project conditions.

Table 5.11-9
Roadway Level of Service – Year 2010 No Project Conditions

Roadway	Location	Classification	ADT (vehicles/day)	Truck Percent of ADT	LOS
I-8	West of Imperial Highway	Freeway	16,100[1]	14	A
I-8	East of Dunaway Road	Freeway	14,100[1]	17	A
US 98	West of Imperial Highway	State Highway	1,575[2]	7	A
Imperial Highway	North of US 98	Collector	330[2]	--	A
Evan Hewes Highway	East of Imperial Highway	Collector	1,300[2]	--	A
Evan Hewes Highway	West of Dunaway Road	Collector	535[2]	29	A
Dunaway Road	North of I-8 westbound ramps	Collector	810[2]	19	A

Source: URS Corporation, 2008.

Notes:

[1]Future forecasted average daily traffic volumes on I-8 were calculated by applying a 2.5 percent annual growth rate to the existing average daily traffic volumes shown in Table 5.11-4, Existing Roadway Level of Service.

[2]Future forecasted average daily traffic volumes on all other roads were calculated by applying a 2.0 percent annual growth rate to the existing average daily traffic volumes shown in Table 5.11-4, Existing Roadway Level of Service.

-- = not available
ADT = average daily traffic
I-8 = Interstate 8
LOS = level of service
US = United States Highway

As shown in Table 5.11-9, Roadway Level of Service – Year 2010 No Project Conditions, all traffic study roadway segments are forecast to operate at LOS A under Year 2010 No Project conditions.

Table 5.11-10, Roadway Level of Service – Year 2010 Project Construction Conditions, shows the roadway LOS for Year 2010 Project Construction conditions.

Table 5.11-10
Roadway Level of Service – Year 2010 Project Construction Conditions

Roadway	Location	Classification	ADT (vehicles/day)	Truck Percent of ADT	LOS
I-8	West of Imperial Highway	Freeway	16,515[1]	14	A
I-8	East of Dunaway Road	Freeway	15,300[1]	17	A
US 98	West of Imperial Highway	State Highway	1,590[2]	7	A
Imperial Highway	North of US 98	Collector	365[2]	--	A
Evan Hewes Highway	East of Imperial Highway	Collector	1,535[2]	--	A
Evan Hewes Highway	West of Dunaway Road	Collector	1,170[2]	29	A
Dunaway Road	North of I-8 Westbound Ramps	Collector	2,240[2]	13	B

Source: URS Corporation, 2008.

Notes:
[1]Future forecasted average daily traffic volumes on I-8 were calculated by applying a 2.5 percent annual growth rate to the existing average daily traffic volumes shown in Table 5.11-4, Existing Roadway Level of Service.
[2]Future forecasted average daily traffic volumes on all other roads were calculated by applying a 2.0 percent annual growth rate to the existing average daily traffic volumes shown in Table 5.11-4, Existing Roadway Level of Service.

-- = not available
ADT = average daily traffic
I-8 = Interstate 8
LOS = level of service
US = United States Highway

As shown in Table 5.11-10, Roadway Level of Service – Year 2010 Project Construction Conditions, all traffic study intersections are forecast to operate at LOS B or better under Year 2010 Project Construction conditions. No study roadway segments will be significantly affected by Project construction activities.

Intersection Level of Service During Project Construction

Table 5.11-11, Peak Hour Intersection Level of Service – Year 2010 No Project Conditions, presents peak hour intersection LOS and average vehicle delay results under Year 2010 No Project conditions. The LOS calculation worksheets are provided in Appendix BB, Traffic Counts. Figure 5.11-5, Year 2010 No Project Traffic Volumes, shows Year 2010 No Project morning and evening peak hour turning movement volumes at each study area intersection.

Table 5.11-11
Peak Hour Intersection Level of Service – Year 2010 No Project Conditions

Intersection	Morning Peak Hour		Evening Peak Hour	
	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
I-8 WB ramp/Imperial Highway	1.7	A	3.3	A
I-8 EB ramp/Imperial Highway	5.6	A	3.3	A
US 98/Imperial Highway	0.9	A	0.8	A
I-8 WB ramp/Dunaway Road	2.6	A	2.1	A
I-8 EB ramp/Dunaway Road	6.9	A	6.9	A

Source: URS Corporation, 2008.

Notes:
EB = eastbound
I-8 = Interstate 8
LOS = level of service
sec = seconds
US = United States Highway
veh = vehicle
WB = westbound

As shown in Table 5.11-11, Peak Hour Intersection Level of Service – Year 2010 No Project Conditions, all study intersections are forecasted to operate at LOS A under Year 2010 No Project conditions.

Table 5.11-12, Peak Hour Intersection Level of Service – Year 2010 Project Construction Conditions, presents peak hour intersection LOS and average vehicle delay results under Year 2010 Project Construction conditions. The LOS calculation worksheets are provided in Appendix BB, Traffic Counts. Figure 5.11-6, Year 2010 No Project Traffic Plus Project Construction Traffic Volumes, shows Year 2010 Project Construction conditions for morning and evening peak hour turning movement volumes at each study area intersection.

Table 5.11-12
Peak Hour Intersection Level of Service – Year 2010 Project Construction Conditions

Intersection	Morning Peak Hour		Evening Peak Hour	
	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
I-8 WB ramp/Imperial Highway	1.6	A	1.1	A
I-8 EB ramp/Imperial Highway	5.1	A	2.7	A
US 98/Imperial Highway	1.3	A	1.6	A
I-8 WB ramp/Dunaway Road	15.3	C	0.2	A
I-8 EB ramp/Dunaway Road	9.6	A	8.8	A

Source: URS Corporation, 2008.

Notes:
EB = eastbound
I-8 = Interstate 8
LOS = level of service
sec = seconds
US = United States Highway
veh = vehicle
WB = westbound

As shown in Table 5.11-12, Peak Hour Intersection Level of Service – Year 2010 Project Construction Conditions, all study intersections are forecast to operate at LOS C or better under Year 2010 Project Construction conditions. No study intersections will be significantly affected by Project construction activities.

The study intersections are anticipated to experience short-term increases in construction traffic during the peak construction period. However, traffic volume is expected to return to pre-project levels on completion of construction.

Project Operations Effects

The Project is projected to be completed by 2017. During the normal O&M of the Project, a planned 164 employee workforce will oversee its O&M. Occasional deliveries and maintenance-related trips are anticipated as part of normal operations. The following sections describe the operational effects of the Project.

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

Roadway Level of Service During Project Operations

Table 5.11-13, Roadway Level of Service – Year 2017 No Project Conditions, shows the roadway LOS for Year 2017 No Project conditions.

Table 5.11-13
Roadway Level of Service – Year 2017 No Project Conditions

Roadway	Location	Classification	ADT (vehicles/day)	Truck Percent of ADT	LOS
I-8	West of Imperial Highway	Freeway	19,125[1]	14	A
I-8	East of Dunaway Road	Freeway	16,750[1]	17	A
US 98	West of Imperial Highway	State Highway	1,875[2]	7	A
Imperial Highway	North of US 98	Collector	395[2]	--	A
Evan Hewes Highway	East of Imperial Highway	Collector	1,565[2]	--	A
Evan Hewes Highway	West of Dunaway Road	Collector	645[2]	29	A
Dunaway Road	North of I-8 westbound ramps	Collector	975[2]	17	A

Source: URS Corporation, 2008.

Notes:
[1]Future forecasted average daily traffic volumes on I-8 were calculated by applying a 2.5 percent annual growth rate to the existing average daily traffic volumes shown in Table 5.11-4, Existing Roadway Level of Service.
[2]Future forecasted average daily traffic volumes on all other roads were calculated by applying a 2.0 percent annual growth rate to the existing average daily traffic volumes shown in Table 5.11-4, Existing Roadway Level of Service.
-- = not available
ADT = average daily traffic
I-8 = Interstate 8
LOS = level of service
US = United States Highway

As shown in Table 5.11-13, Roadway Level of Service – Year 2017 No Project Conditions, all study roadway segments are forecast to operate at LOS A under Year 2017 No Project conditions.

Table 5.11-14, Roadway Level of Service – Year 2017 Project Operations Conditions, shows the roadway LOS for Year 2017 Project Operations conditions.

Table 5.11-14
Roadway Level of Service – Year 2017 Project Operations Conditions

Roadway	Location	Classification	ADT (vehicles/day)	Truck Percent of ADT	LOS
I-8	West of Imperial Highway	Freeway	19,165[1]	14	A
I-8	East of Dunaway Road	Freeway	16,970[1]	17	A
US 98	West of Imperial Highway	State Highway	1,880[2]	7	A
Imperial Highway	North of US 98	Collector	400[2]	--	A
Evan Hewes Highway	East of Imperial Highway	Collector	1,615[2]	--	A
Evan Hewes Highway	West of Dunaway Road	Collector	880[2]	29	A
Dunaway Road	North of I-8 westbound ramps	Collector	1,090[2]	14	A

Source: URS Corporation, 2008.

Notes:
[1]Future forecasted average daily traffic volumes on I-8 were calculated by applying a 2.5 percent annual growth rate to the existing average daily traffic volumes shown in Table 5.11-4, Existing Roadway Level of Service.
[2]Future forecasted average daily traffic volumes on all other roads were calculated by applying a 2.0 percent annual growth rate to the existing average daily traffic volumes shown in Table 5.11-4, Existing Roadway Level of Service.
-- = not available
ADT = average daily traffic
I-8 = Interstate 8
LOS = level of service
US = United States Highway

As shown in Table 5.11-14, Roadway Level of Service – Year 2017 Project Operations Conditions all study roadway segments are forecast to operate at LOS A under Year 2017 Project Operations conditions.

Intersection Level of Service During Project Operations

Table 5.11-15, Peak Hour Intersection Level of Service – Year 2017 No Project Conditions, presents peak hour intersection LOS and average vehicle delay under Year 2017 No Project conditions. The LOS calculation worksheets are provided in Appendix BB, Traffic Counts. Figure 5.11-7, Year 2017 No Project Traffic Volumes, shows Year 2017 No Project conditions for morning and evening peak hour turning movement volumes for each traffic study area intersection.

Table 5.11-15
Peak Hour Intersection Level of Service – Year 2017 No Project Conditions

Intersection	Morning Peak Hour		Evening Peak Hour	
	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
I-8 WB ramp/Imperial Highway	1.7	A	2.8	A
I-8 EB ramp/Imperial Highway	5.7	A	3.2	A
US 98/Imperial Highway	0.8	A	0.9	A
I-8 WB ramp/Dunaway Road	1.0	A	0.4	A
I-8 EB ramp/Dunaway Road	8.3	A	10.9	B

Source: URS Corporation, 2008.

Notes:
EB = eastbound
I-8 = Interstate 8
LOS = level of service
sec = seconds
US = United States Highway
veh = vehicle
WB = westbound

As shown in Table 5.11-15, Peak Hour Intersection Level of Service – Year 2017 No Project Conditions, all study intersections are forecast to operate at LOS B or better under Year 2017 No Project conditions.

Table 5.11-16, Peak Hour Intersection Level of Service – Year 2017 Project Operations Conditions, presents peak hour intersection LOS and average vehicle delay results under Year 2017 Project Operations conditions. The LOS calculation worksheets are provided in Appendix BB, Traffic Counts. Figure 5.11-8, Year 2017 No Project Traffic Plus Project Operations Traffic Volumes, shows Year 2017 Project Operations morning and evening peak hour turning movement volumes for each study area intersection.

Table 5.11-16
Peak Hour Intersection Level of Service –Year 2017 Project Operations Conditions

Intersection	Morning Peak Hour		Evening Peak Hour	
	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
I-8 WB ramp/Imperial Highway	1.5	A	2.8	A
I-8 EB ramp/Imperial Highway	6.1	A	3.2	A
US 98/Imperial Highway	0.9	A	0.9	A
I-8 WB ramp/Dunaway Road	3.3	A	0.4	A
I-8 EB ramp/Dunaway Road	8.3	A	10.9	B

Source: URS Corporation, 2008.

Notes:
Unsignalized intersections could experience a reduction in average delay with added trips on the free-flow movements (uncontrolled) but would have increased delays at the stop-controlled approaches.
EB = eastbound
I-8 = Interstate 8
LOS = level of service
sec = seconds
US = United States Highway
veh = vehicle
WB = westbound

As shown in Table 5.11-16, Peak Hour Intersection Level of Service – Year 2017 Project Operations Conditions, all traffic study area intersections are forecast at LOS B or better under Year 2017 Project Operations.

Due to the minimal number of added trips associated with Year 2017 Project Operations, there would be a minimal increase in intersection delay. The minimal increase in intersection delay would not cause degradation of LOS to unacceptable levels or a significant effect.

Based on these findings, no significant traffic effects would occur at the traffic study area intersections during Project operations.

5.11.2.6 Project Effects Summary

Effects of Construction Traffic on Roadways

The roadways that will experience a short-term increase in traffic due to construction worker and truck deliveries will be I-8, US 98, Dunaway Road, Evan Hewes Highway, and Imperial Highway. The projected added trips along these roadways, however, would not result in degradation of their current LOS to unacceptable levels.

Based on these findings, no significant traffic effects would occur at the traffic study area roadways during Project construction.

Effects of Construction Traffic on Intersections

The results of the intersection LOS analysis shown in Table 5.11-12, Peak Hour Intersection Level of Service – Year 2010 Project Construction Conditions, indicate that all study intersections would continue to operate at an acceptable LOS C or better during both morning

and evening peak hour analysis periods. These good intersection operating conditions are attributed to the low baseline pre-construction traffic in the study area which provided sufficient intersection capacity to handle short-term construction traffic.

Based on these findings, no significant traffic effects would occur at the traffic study intersections during Project construction.

Effects of Project Operations Traffic on Roadways

Similar to construction conditions, the roadways that will experience Project operational traffic will be I-8, US 98, Dunaway Road, Evan Hewes Highway, and Imperial Highway. The projected added trips from operational workers, maintenance deliveries and visitors along these roadways, however, would not result in degradation of the future pre-operational roadway LOS to unacceptable levels.

Based on these findings, no significant traffic effects would occur at the traffic study area roadways during Project operations.

Effects of Project Operations on Intersections

The results of the intersection LOS analysis, shown in Table 5.11-16, Peak Hour Intersection Level of Service – Year 2017 Project Operations Conditions, indicate that all study intersections would continue to operate at an acceptable LOS B or better during both morning and evening peak hour analysis periods. These good intersection operating conditions are attributed to the low future pre-operational traffic in the study area which provided sufficient intersection capacity to handle Project operations traffic.

Based on these findings, no significant traffic effects would occur at the traffic study intersections during Project operation.

5.11.3 Cumulative Effects

Based on available information, 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 the forecast traffic generation of the proposed Desert Springs Resort located northeast of the Project Site as part of the future baseline (Year 2017 No Project) conditions. The result of the traffic analysis showed that the proposed Solar Two Project operational traffic combined with future ambient traffic growth and the cumulative traffic generated by the proposed Desert Springs Resort 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 effects.

5.11.4 Mitigation Measures

5.11.4.1 Project Construction Mitigations

During Project construction, no study roadway segments or study intersections will be significantly affected by the Project. Therefore, no Project construction traffic mitigations are proposed to address roadway and intersection LOS deficiencies.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

No mitigation is required, as Project construction traffic effects are less than significant.

5.11.4.2 Project Operations Mitigations

During Project operations, no study roadway segments or study intersections will be significantly affected by the Project. Therefore, no Project operations traffic mitigations are proposed to address roadway and intersection LOS deficiencies.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

No mitigation is required, as Project operations traffic effects are less than significant.

5.11.4.3 Pro-active Mitigation Measures

As described above, during Project construction and operations, no study roadway segments and intersections would be significantly affected by the Project.

The following proposed mitigation measures will be offered pro-actively to address Project related activities during construction or operations.

- **Traffic Control Measures:** Utilize proper signs and traffic control measures in accordance with Caltrans and County requirements. All traffic signs, equipments, and control measures shall conform to the provisions specified in the Manual of Uniform Traffic Control Device California Edition.
- **Lane Closures:** Schedule traffic lane or road closures during off-peak hours whenever possible.
- **Limit Construction Traffic:** Limit vehicular traffic to designated access roads, construction laydown and worker parking areas, and Project construction site. Encourage workers to carpool to minimize drive-alone worker trips.

5.11.5 Compliance with LORS

5.11.5.1 Federal

Title 49, Code of Federal Regulations, Sections 171-177

Governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

The administering agency for the above regulation is the CHP.

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

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

Requires an applicant to notify 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 10:1 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 Project heights will not exceed 200 feet. Therefore, notification to the FAA will not be required.

5.11.5.2 State

California Vehicle Code, Section 353

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 regulation is the CHP.

California Vehicle Code, Sections 13369, 15275, and 15278

Addresses the licensing of drivers and the classification of license required for the operation of particular types of vehicles. Requires a commercial driver's license to operate commercial vehicles. Requires an endorsement issued by the Department of Motor Vehicles to drive any commercial vehicle identified in Section 15278.

The administering agency for the above regulation is the DMV.

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

California Vehicle Code, Sections 31303-31309

Requires that the 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 regulation is the CHP.

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

California Vehicle Code, Sections 32000-32053

Authorizes the CHP to inspect and license motor carriers transporting hazardous materials.

The administering agency for the above regulation is the CHP.

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

California Vehicle Code, Sections 32100-32109

Requires that shippers of inhalation hazard or explosive materials must contact the CHP and apply for a hazardous material transportation license.

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 obtain the hazardous material transportation license.

California Vehicle Code, Sections 34000-34100

Establishes special requirements for vehicles having a cargo tank and to hazardous waste transport vehicles and containers, as defined in Section 25167.4 of the Health and Safety Code. 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 to 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 Health and Safety Code.

The administering agency for the above regulation is the CHP.

The Project would comply with this law by requiring that shippers of hazardous materials be properly licensed by the CHP and hazardous material transport vehicles be in compliance with CHP inspection procedures.

California Vehicle Code, Section 3500

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 that shippers of hazardous materials have the necessary permits, inspections, and licenses issued by the CHP for the safe operation of hazardous materials transport vehicles.

California Vehicle Code Section 35550

Imposes weight guidelines and restrictions on vehicles traveling on freeways and highways. The section holds that "a single axle load shall not exceed 20,000 pounds (lbs). The load on any one wheel or wheels supporting one end of an axle is limited to 10,500 lbs. The front steering axle load is limited to 12,500 lbs." Furthermore, California Vehicle Code 35551 defines the maximum overall gross weight as 80,000 lbs and adds that "the gross weight of each set of tandem axles shall not exceed 34,000 lbs."

The administering agency for the above regulation is Caltrans.

The Project would comply with this code by requiring heavy haulers to obtain permits, if required, before delivery.

California Vehicle Code, Section 35780

Requires a single-trip transportation permit to transport oversized or excessive loads over state highways. The permit can be acquired through Caltrans.

The administering agency for the above regulation 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, before delivery.

California Streets and Highways Code, Section 117

Requires, unless otherwise specifically provided in the instrument conveying title, the acquisition by Caltrans of any ROW over any real property for state highway purposes, includes the right of Caltrans 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 regulation 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.

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

Defines highways and encroachment, requires encroachment permits for projects involving excavation in state highways and county/city streets. This law is generally enforced at the local level.

The administering agency for the above regulation is Caltrans and Imperial County.

The applicant or its assigned contractors would apply for encroachment permits for any excavation in state and county roadways before construction.

California Health and Safety Code, Section 25160 et seq.

Addresses the safe transport of materials, requires a manifest of hazardous cargo, and requires that a person who transports hazardous waste in a vehicle shall have a valid registration issued by the Department of Health Services, in his or her possession, while transporting hazardous waste.

The administering agency for the above regulation is the CHP.

The Project would comply with this law by requiring that shippers of hazardous materials be properly licensed by the CHP and hazardous material transport vehicles are in compliance with CHP inspection procedures.

California Manual of Traffic Control Device, Section 6C.01

Requires a temporary traffic control plan (TTC) 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. Some important elements that cannot be conveniently shown in the plans will be incorporated in the Special Provisions of the TTC.

The administering agency for the above regulation is Caltrans and/or Imperial County. If needed, the applicant would file a TTC before the start of construction.

5.11.5.3 Local

Imperial County has LORS that specifically address the traffic and circulation associated with the Project and the community at large. The County and City Land Use Ordinance and the General Plan Circulation and Scenic Highway Element, were the main sources of the following paragraphs summarizing the applicable LORS and programs and policies that address traffic and circulation that could be affected by construction of the Project.

Imperial County General Plan, Circulation and Scenic Highway Element, Programs and Policies, 1.0 Circulation and Scenic Highways Plan, c. New Local Roads

The goal of the Circulation and Scenic Highways Plan is to provide a network of roadway systems for the County. The County requires new development to provide for local roads to serve the direct access needs of the abutting property.

The administering agency for the above policy is the Imperial County Department of Public Works (DPW).

If applicable, the Project would comply with this policy to provide a local road in conjunction with construction of the Project.

Imperial County General Plan, Circulation and Scenic Highway Element, Programs and Policies, 1.0 Circulation and Scenic Highways Plan, f. Private Streets

The County may permit construction of private streets within individual development projects with specific conditions outlined in the policy.

The administering agency for the above policy is the Imperial County DPW.

If applicable, the Project would comply with this policy to provide a private road in conjunction with construction of the Project.

Imperial County General Plan, Circulation and Scenic Highway Element, Programs and Policies, 2.0 Ordinance Review

Zoning regulation and the setback portions must be reviewed and made to conform to the needs of this element. It ensures that future construction will not interfere with present and potential highway needs; analyzes the adequacy of existing ROWs and secures ROWs, if needed; and requires the dedication of ROW and street improvement as a condition for the issuance of building permits for designated land uses such as multiple family, commercial, and industrial zones.

The administering agency for the above policy is the Imperial County DPW.

Construction of permanent structures for the Project, including perimeter fencing, shall take into consideration future roadway ROW needs.

Imperial County General Plan, Circulation and Scenic Highway Element, Programs and Policies, 6.0 Transportation Demand Management, b. Policies

The county prohibits the use of public streets for freight loading and unloading.

The administering agency for the above policy is the Imperial County DPW.

The Project would include an adequate construction laydown and staging area to avoid the use of public roadway facilities for freight loading and unloading activities.

Airport Land Use Compatibility Plan

Requires compatibility with the goals and objectives of the Airport Land Use Compatibility Plan.

The administering entity for the above plan is the Imperial County Airport Land Use Commission.

The Project would ensure that all structures and transmission line facilities for the Project are compatible with the goals and objectives of the Airport Land Use Compatibility Plan.

The LORS applicable to traffic and transportation are summarized in Table 5.11-17, Summary of LORS – Traffic and Transportation.

Table 5.11-17
Summary of LORS – Traffic and Transportation

LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
Federal Jurisdiction				
Title 49, Code of Federal Regulations, Sections 171-177	Governs the transportation of hazardous materials, including the marking of transportation vehicles.	Section 5.11.5.1	CHP	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	FAA	1
State Jurisdiction				
California Vehicle Code, Section 353	Defines the hazardous materials.	Section 5.11.5.2	CHP	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 for permitting the operation of vehicles transporting hazardous materials.	Section 5.11.5.2	California DMV	5
California Vehicle Code, Sections 31303-31309	Requires transporters of hazardous materials to use the shortest route possible.	Section 5.11.5.2	CHP	2
California Vehicle Code, Sections 32000-32053	Regulates the licensing of carriers of hazardous materials and noticing requirements.	Section 5.11.5.2	CHP	2
California Vehicle Code, Sections 32100-32109	Transporters of inhalation hazardous materials or explosive materials must obtain a hazardous materials transportation license.	Section 5.11.5.2	CHP	2
California Vehicle Code, Sections 34000-34100	Establish special requirements for flammable and combustible liquids over public roads and highways.	Section 5.11.5.2	CHP	2
California Vehicle Code, Section 34500	Regulate the safe operation of vehicles, including those that are used for the transportation of hazardous materials.	Section 5.11.5.2	CHP	2
California Vehicle Code, Section 35550	Imposes weight guidelines and restrictions on vehicles traveling on freeways and highways.	Section 5.11.5.2	Caltrans	3
California Vehicle Code, Section 35780	Requires approval for a permit to transport oversized or excessive loads over state highways.	Section 5.11.5.2	Caltrans	3
California Streets and Highways Code, Sections 117	Requires 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 5.11.5.2	Caltrans	3

Table 5.11-17
Summary of LORS – Traffic and Transportation

LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
California Streets and Highways Code, Sections 660, 670, 672, 450, 1460, 1470, 1480 *et seq.*	Defines highways and encroachment. Regulates ROW encroachment and the granting of permits with conditions for encroachment in state and county roads.	Section 5.11.5.2	Caltrans and Imperial County	4, 6
California Health and Safety Code, Section 25160 *et seq.*	Addresses the safe transport of hazardous materials.	Section 5.11.5.2	CHP	2
California Department of Transportation Traffic Manual, Section 5-1.1	Requires traffic control plans to ensure continuity of traffic during roadway construction.	Section 5.11.5.2	Imperial County	6
Local Jurisdiction				
Imperial County General Plan, Circulation and Scenic Highway Element, Programs and Policies, 1.0 Circulation and Scenic Highways Plan, c. New Local Roads	c. (New Local Roads). Requires new development to provide local roads to serve the direct needs of the abutting property.	Section 5.11.5.3	Imperial County	6
Imperial County General Plan, Circulation and Scenic Highway Element, Programs and Policies, 1. Circulation and Scenic Highways Plan, f. private streets	f. (Private Streets). The County may permit construction of private streets within individual developments with conditions.	Section 5.11.5.3	Imperial County	6
Imperial County General Plan, Circulation and Scenic Highway Element, Programs and Policies, 2. Ordinance Review	Zoning regulation and the setback portions. Ensures that future construction will not interfere with present and potential highway needs. Analyzes the adequacy of existing ROWs and secures ROWs if needed. Requires the dedication of ROW and street improvement as a condition for the issuance of building permits for designated land uses.	Section 5.11.5.3	Imperial County	6, 7
Imperial County General Plan, Circulation and Scenic Highway Element, Programs and Policies, 6. Transportation Demand Management, b. Policies	b. (Policies) The County shall prohibit the use of public streets for freight loading and unloading.	Section 5.11.5.3	Imperial County	6

Table 5.11-17
Summary of LORS – Traffic and Transportation

LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
Airport Land Use Compatibility Plan	Requires that the Project facilities be in compliance with the plan.	Section 5.11.5.3	Imperial County Airport Land Use Commission	6, 7

Source: URS Corporation, 2008.
Notes:
The numbers in the Agency Contact column refer to the agency contacts contained in Table 5.11-18, Agency Contact List for LORS.
Caltrans = California Department of Transportation
CHP = California Highway Patrol
DMV = Department of Motor Vehicles
FAA = Federal Aviation Administration
LORS = laws, ordinances, regulations, and standards
ROW = right-of-way

5.11.5.4 Agencies and Agency Contacts

Agencies with jurisdiction to issue applicable permits and/or enforce LORS related to traffic and transportation are shown in Table 5.11-18, Agency Contact List for LORS.

Table 5.11-18
Agency Contact List for LORS

	Agency	Contact	Address	Telephone
1	Federal Aviation Administration	Karen McDonald	15000 Aviation Boulevard Lawndale, CA 90261-1002	310-725-6557
2	California Highway Patrol	Officer Richard Bird	2331 Highway 86 Imperial, CA 92251	760-482-2500
3	California Department of Transportation, South Region Transportation Permits Office	Moe Bhuyian	464 West 4th Street, MS 618 San Bernardino, CA 92401	909-553-8402
4	California Department of Transportation, District 11, Development Services Branch	Jacob Armstrong	4050 Taylor Street San Diego, CA 92110	619-688-6960
5	Department of Motor Vehicles, Licensing Operations Division	Public Inquiry	2415 1st Avenue Mail Station F101 Sacramento, CA 95818	916-657-8698
6	Imperial County Public Works Department	Neil Jorgenson	155 South 11th Street El Centro, CA 92243	760-482-4462
7	Imperial County Planning Department	Richard Cabanilla	801 Main Street El Centro, CA 92243	760-482-4236

Source: URS Corporation, 2008.

5.11.5.5 Permits Required and Permitting Schedule

The permits required for this Project are listed in Table 5.11-19, Applicable Permits.

Table 5.11-19
Applicable Permits

Responsible Agency	Permit/Approval	Schedule
Imperial County, Department of Public Works	Encroachment Permit	As needed
Imperial County, Department of Public Works	Transportation Permit	As needed
California Department of Transportation	Encroachment Permit	As needed
California Department of Transportation	Transportation Permit	As needed

Source: URS Corporation, 2008.

5.11.6 References

California Code. 2008a. Vehicle Code.

_____. 2008b. Streets and Highways Code.

Caltrans (California Department of Transportation). 2008a. *2006 Traffic Volumes*.

_____. 2008b. *2005 Truck Volumes*.

_____. 2008c. Telephone conversation and e-mail correspondence with Maurice Eaton, District 11 Planning Dept., California Department of Transportation (maurice_eaton@dot.ca.gov) on 3 and 4 January 2008, 619-688-3137.

_____. 2008d. E-mail correspondence with Jacob Armstrong, Chief, Development Review Branch.

_____. 2008e. District 11 Planning Department, California Department of Transportation (jacob_armstrong@dot.ca.gov) on 11 and 12 January 2008, 619-688-6960.

_____. 2008f. *California Manual of Uniform Traffic Control Device (MUTCD)-(FHWA's MUTCD 2003 Revision 1, as amended for use in California)*

CFR (Code of Federal Regulations). 2008a. *Title 14 Aeronautics and Space, Federal Aviation Administration.*

_____. 2008b. *Title 49 Environment, Subtitle B – Other Regulations Relating to Transportation.*

Dowling Associates. 1997-2000. *Traffix for Windows*. Version 7.6R1.

Florida Department of Transportation. 2002. Quality/Level of Service Handbook (Updated 2003 and 2007).

Imperial County. 2006a. General Plan Circulation and Scenic Highway Element.

_____. 2006b. General Plan Land Use Element.

_____. 2006c. General Plan.

_____. 2007d. Transportation Plan.

_____. 2007. Highway Element.

Imperial County Planning and Development Services Department. 2008. Telephone conversation with Richard Cabanilla on 25 January 2008, 760-482-4236.

Imperial County Public Works Department. 2008. Telephone conversation with Neil Jorgenson re: Approval of Traffic Analysis Scenario and Growth assumptions on 31 January 2008, 760-482-4462.

McTrans Center, University of Florida. 2000. *Highway Capacity Software.* Version 4.1a.

NDS (National Data Services), Southland Car Counters. 2008a. *24-hour ADT and Peak Hour Intersection Traffic Counts.*

_____. 2008b. Traffic counts collected on 24 January 2008. Document provided by National Data Services (NDS) Manager Steve Suter, 714-997-4498.

Stantec. 2008a. Electronic e-mail communication and telephone conversation with Rich Brasher, Associate, Urban Land Planning ("Brasher, Rich" <rich.brasher@stantec.com>) on 28 January 2008, 760-891-3217.

_____. 2008b. *Desert Springs Resort Traffic Impact Study (31 August 2007)*

Southern California Association of Governments. 2004. *2004 Regional Transportation Plan.*

Transportation Research Board. 2000. *Highway Capacity Manual (Updated).*

Trafficware Corporation. 1993-2001. *Synchro*. Version 5 (Build 323).

URS Corporation. 2008. Field work, observations, research, and modeling.

U.S. Gypsum, Plaster City. 2008. Electronic e-mail communication and telephone conversation with Erin Cain, Project Engineer (ekain@usg.com) re: Plaster City truck movements on 13 February 2008, 760-358-3364.

Adequacy Issue:	Adequate		Inadequate		DATA ADEQUACY WORKSHEET	Revision No.	0	Date	
Technical Area:	**Traffic and Transportation**			Project:	Solar Two Project		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 5.11.1.6 Section 5.11.2.5 through Section 5.11.4.3 Section 5.11.5.1 through Section 5.11.5.5		
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 5.11.1.6 Section 5.11.5.1 Figure 5.11-2A Figure 5.11-2B Figure 5.11-2C		

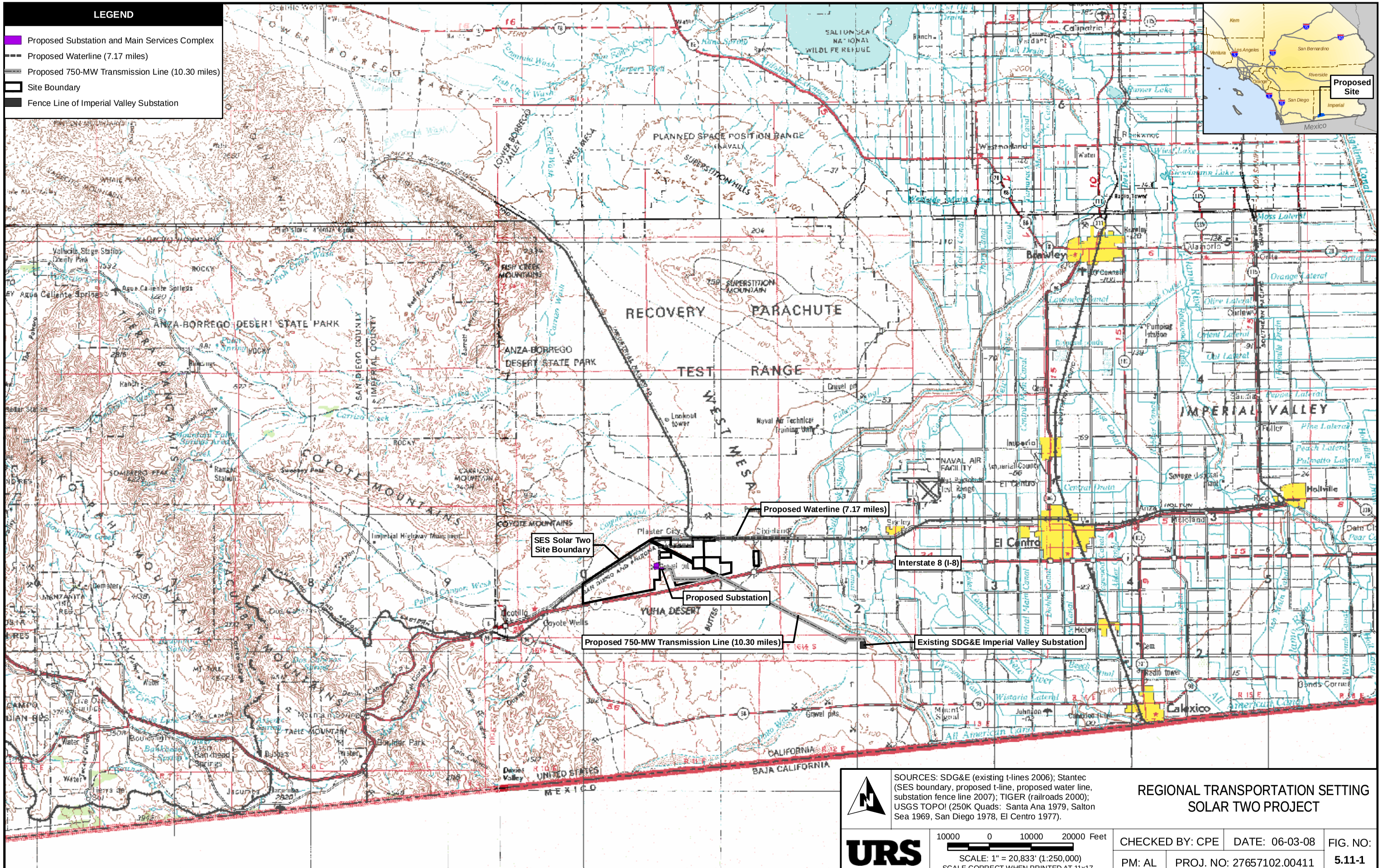
Adequacy Issue:	Adequate		Inadequate		DATA ADEQUACY WORKSHEET	Revision No.	0	Date	
Technical Area:	**Traffic and Transportation**			Project:	Solar Two Project		Technical Staff:		
Project Manager:				Docket:			Technical Senior:		

SITING REGULATIONS	INFORMATION	AFC SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (5) (C)	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 5.11-2A Figure 5.11-2B Figure 5.11-2C		
Appendix B (g) (5) (C) (i)	Road classification and design capacity;	Section 5.11.1.7 Figure 5.11-2A Figure 5.11-2B Figure 5.11-2C		
Appendix B (g) (5) (C) (ii)	Current daily average and peak traffic counts;	Section 5.11.1.8 Appendix BB, Traffic Counts Figure 5.11-2A Figure 5.11-2B Figure 5.11-2C 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 5.11.1.8 Section 5.11.2.5 Figure 5.11-2A Figure 5.11-2B Figure 5.11-2C		
Appendix B (g) (5) (C) (iv)	Weight and load limitations;	Section 5.11.5.2		
Appendix B (g) (5) (C) (v)	Estimated percentage of current traffic flows for passenger vehicles and trucks; and	Section 5.11.1.8 Figure 5.11-2A Figure 5.11-2B Figure 5.11-2C		
Appendix B (g) (5) (C) (vi)	An identification of any road features affecting public safety.	Section 5.11.1.2		

Adequacy Issue:	Adequate		Inadequate		DATA ADEQUACY WORKSHEET	Revision No.	0	Date	
Technical Area:	**Traffic and Transportation**			Project:	Solar Two Project		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) (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 5.11.2.5 through Section 5.11.2.6		
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 5.11.2.5 Section 5.11.4 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		
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		

Adequacy Issue:	Adequate		Inadequate		DATA ADEQUACY WORKSHEET	Revision No.	0	Date	
Technical Area:	**Traffic and Transportation**			Project:	Solar Two Project		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) (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 5.11.5.4				
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 5.11.5.5				



SOURCES: SDG&E (existing t-lines 2006); Stantec (SES boundary, proposed t-line, proposed water line, substation fence line 2007); TIGER (railroads 2000); USGS TOPO! (250K Quads: Santa Ana 1979, Salton Sea 1969, San Diego 1978, El Centro 1977).

REGIONAL TRANSPORTATION SETTING
SOLAR TWO PROJECT

URS

10000 0 10000 20000 Feet

SCALE: 1" = 20,833' (1:250,000)
SCALE CORRECT WHEN PRINTED AT 11x17

CHECKED BY: CPE	DATE: 06-03-08	FIG. NO:
PM: AL	PROJ. NO: 27657102.00411	5.11-1

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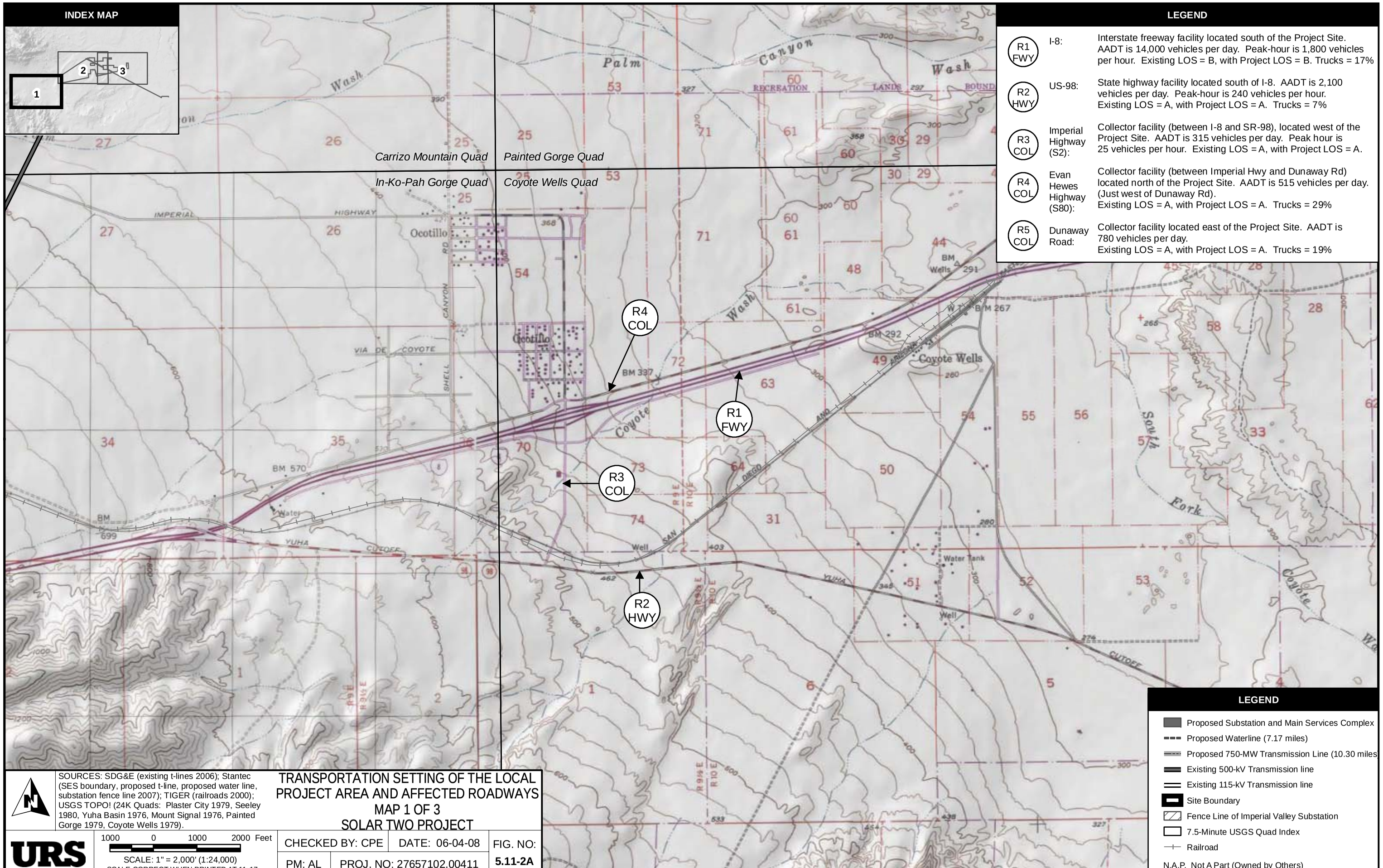

LEGEND

R1 FWY	I-8:	Interstate freeway facility located south of the Project Site. AADT is 14,000 vehicles per day. Peak-hour is 1,800 vehicles per hour. Existing LOS = B, with Project LOS = B. Trucks = 17%
R2 HWY	US-98:	State highway facility located south of I-8. AADT is 2,100 vehicles per day. Peak-hour is 240 vehicles per hour. Existing LOS = A, with Project LOS = A. Trucks = 7%
R3 COL	Imperial Highway (S2):	Collector facility (between I-8 and SR-98), located west of the Project Site. AADT is 315 vehicles per day. Peak hour is 25 vehicles per hour. Existing LOS = A, with Project LOS = A.
R4 COL	Evan Hewes Highway (S80):	Collector facility (between Imperial Hwy and Dunaway Rd) located north of the Project Site. AADT is 515 vehicles per day. (Just west of Dunaway Rd). Existing LOS = A, with Project LOS = A. Trucks = 29%
R5 COL	Dunaway Road:	Collector facility located east of the Project Site. AADT is 780 vehicles per day. Existing LOS = A, with Project LOS = A. Trucks = 19%

SOURCES: SDG&E (existing t-lines 2006); Stantec (SES boundary, proposed t-line, proposed water line, substation fence line 2007); TIGER (railroads 2000); USGS TOPO! (24K Quads: Plaster City 1979, Seeley 1980, Yuha Basin 1976, Mount Signal 1976, Painted Gorge 1979, Coyote Wells 1979).

TRANSPORTATION SETTING OF THE LOCAL PROJECT AREA AND AFFECTED ROADWAYS
MAP 1 OF 3
SOLAR TWO PROJECT

URS

1000 0 1000 2000 Feet

SCALE: 1" = 2,000' (1:24,000)
SCALE CORRECT WHEN PRINTED AT 11x17

CHECKED BY: CPE	DATE: 06-04-08	FIG. NO:
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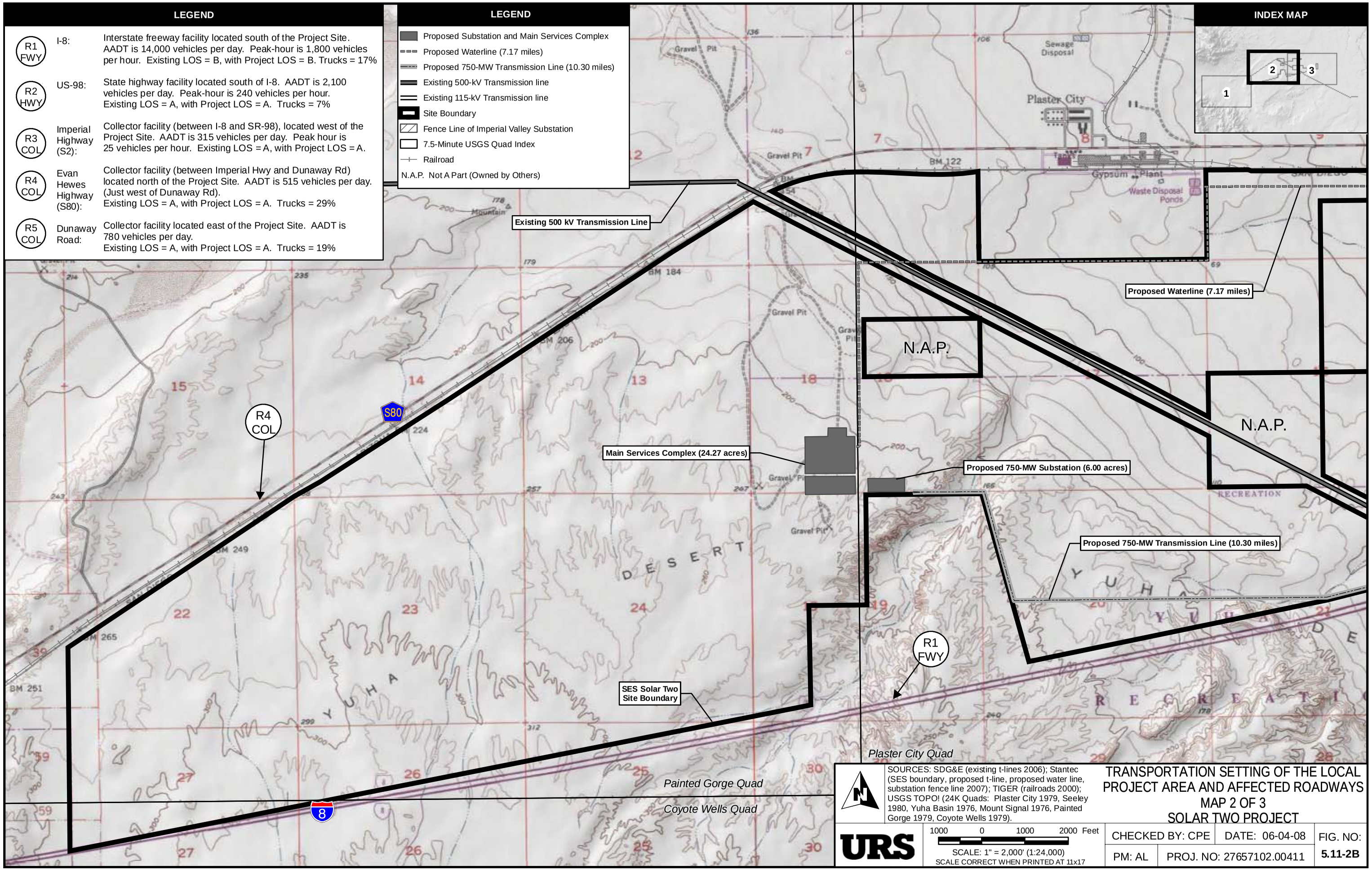

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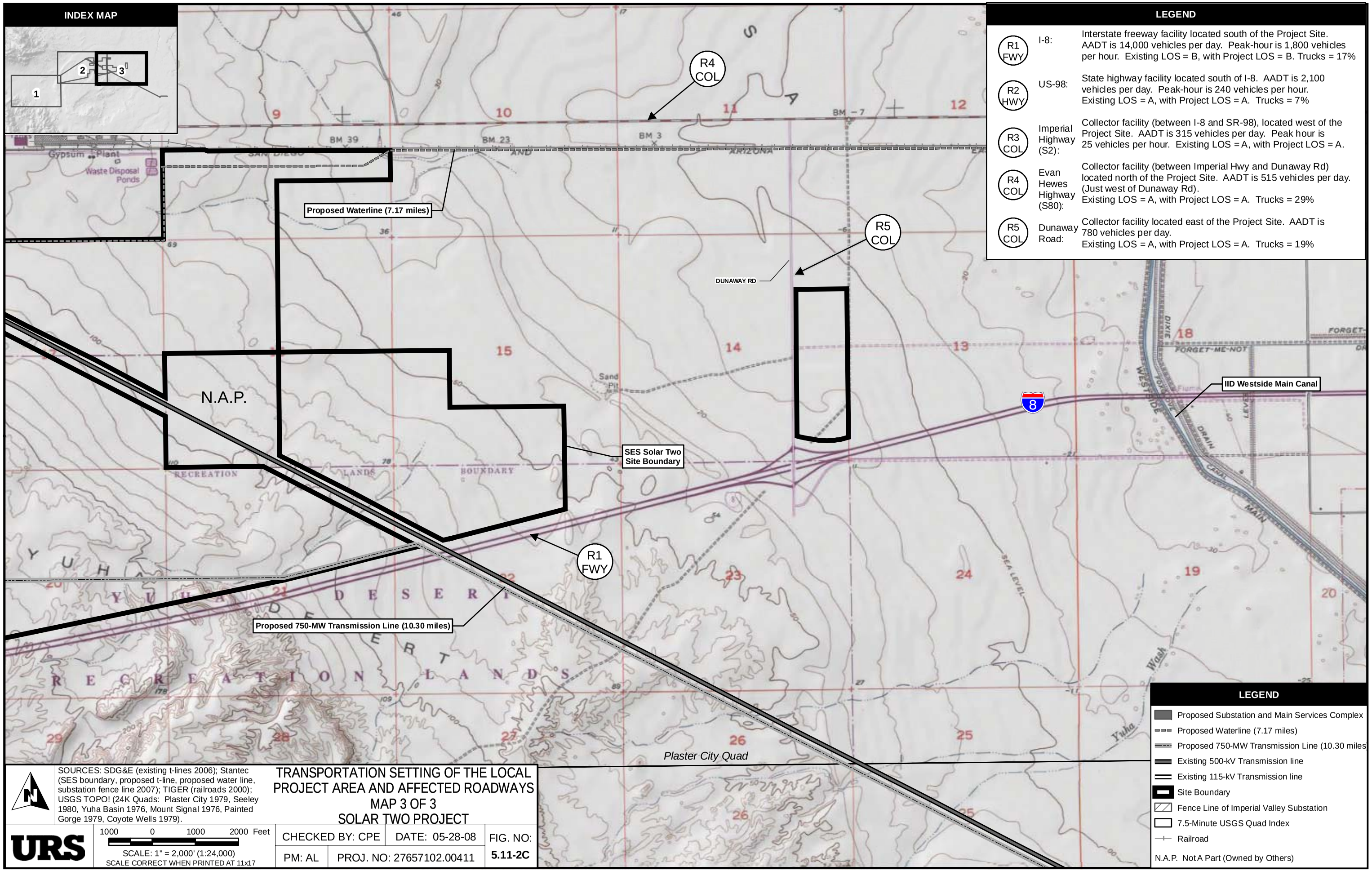

LEGEND

R1 FWY	I-8:	Interstate freeway facility located south of the Project Site. AADT is 14,000 vehicles per day. Peak-hour is 1,800 vehicles per hour. Existing LOS = B, with Project LOS = B. Trucks = 17%
R2 HWY	US-98:	State highway facility located south of I-8. AADT is 2,100 vehicles per day. Peak-hour is 240 vehicles per hour. Existing LOS = A, with Project LOS = A. Trucks = 7%
R3 COL	Imperial Highway (S2):	Collector facility (between I-8 and SR-98), located west of the Project Site. AADT is 315 vehicles per day. Peak hour is 25 vehicles per hour. Existing LOS = A, with Project LOS = A.
R4 COL	Evan Hewes Highway (S80):	Collector facility (between Imperial Hwy and Dunaway Rd) located north of the Project Site. AADT is 515 vehicles per day. (Just west of Dunaway Rd). Existing LOS = A, with Project LOS = A. Trucks = 29%
R5 COL	Dunaway Road:	Collector facility located east of the Project Site. AADT is 780 vehicles per day. Existing LOS = A, with Project LOS = A. Trucks = 19%

SOURCES: SDG&E (existing t-lines 2006); Stantec (SES boundary, proposed t-line, proposed water line, substation fence line 2007); TIGER (railroads 2000); USGS TOPO! (24K Quads: Plaster City 1979, Seeley 1980, Yuha Basin 1976, Mount Signal 1976, Painted Gorge 1979, Coyote Wells 1979).

TRANSPORTATION SETTING OF THE LOCAL PROJECT AREA AND AFFECTED ROADWAYS
MAP 3 OF 3
SOLAR TWO PROJECT

URS

1000 0 1000 2000 Feet

SCALE: 1" = 2,000' (1:24,000)
SCALE CORRECT WHEN PRINTED AT 11x17

CHECKED BY: CPE	DATE: 05-28-08	FIG. NO:
PM: AL	PROJ. NO: 27657102.00411	5.11-2C

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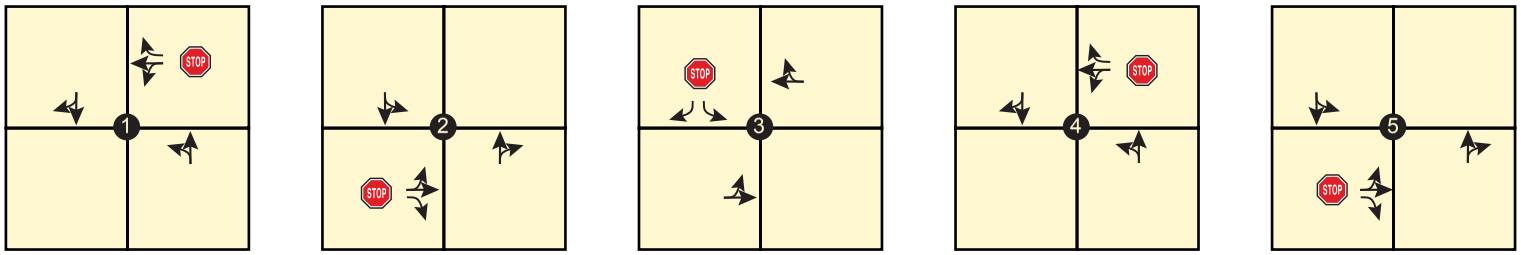
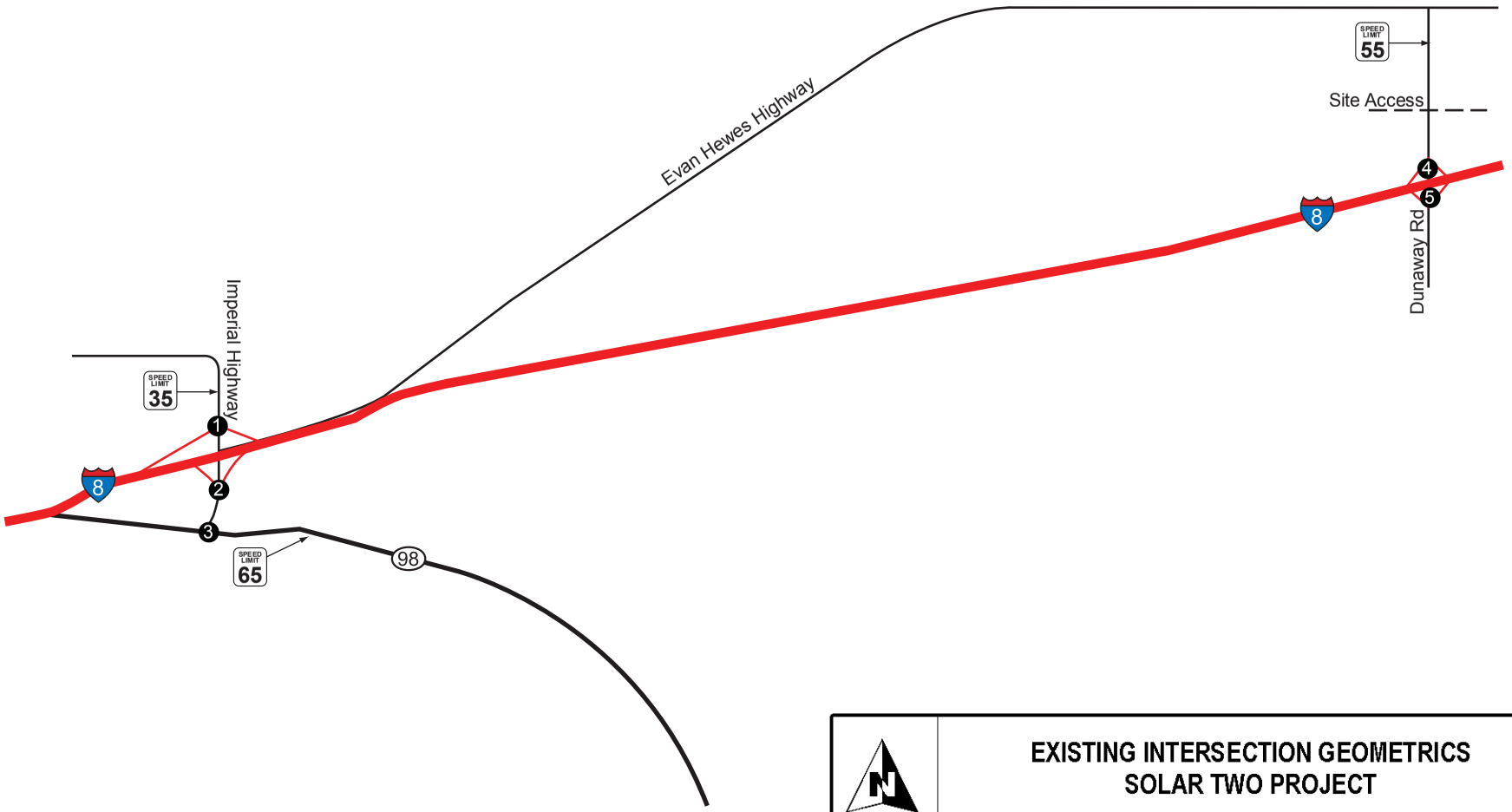
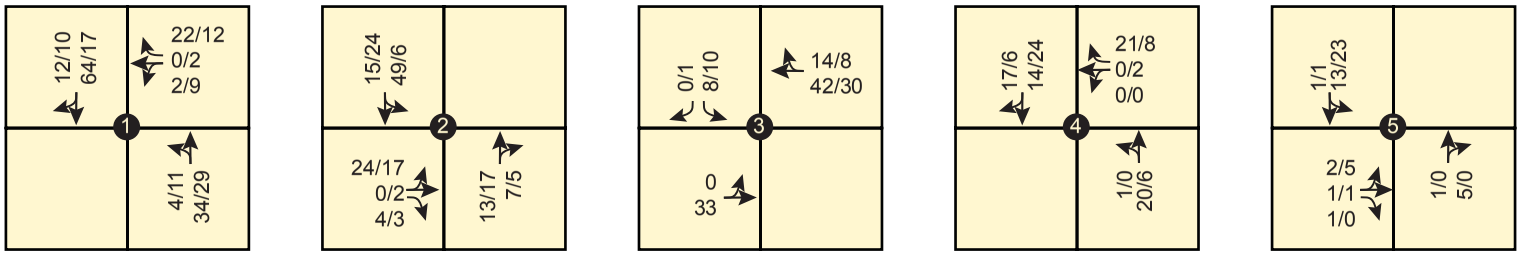


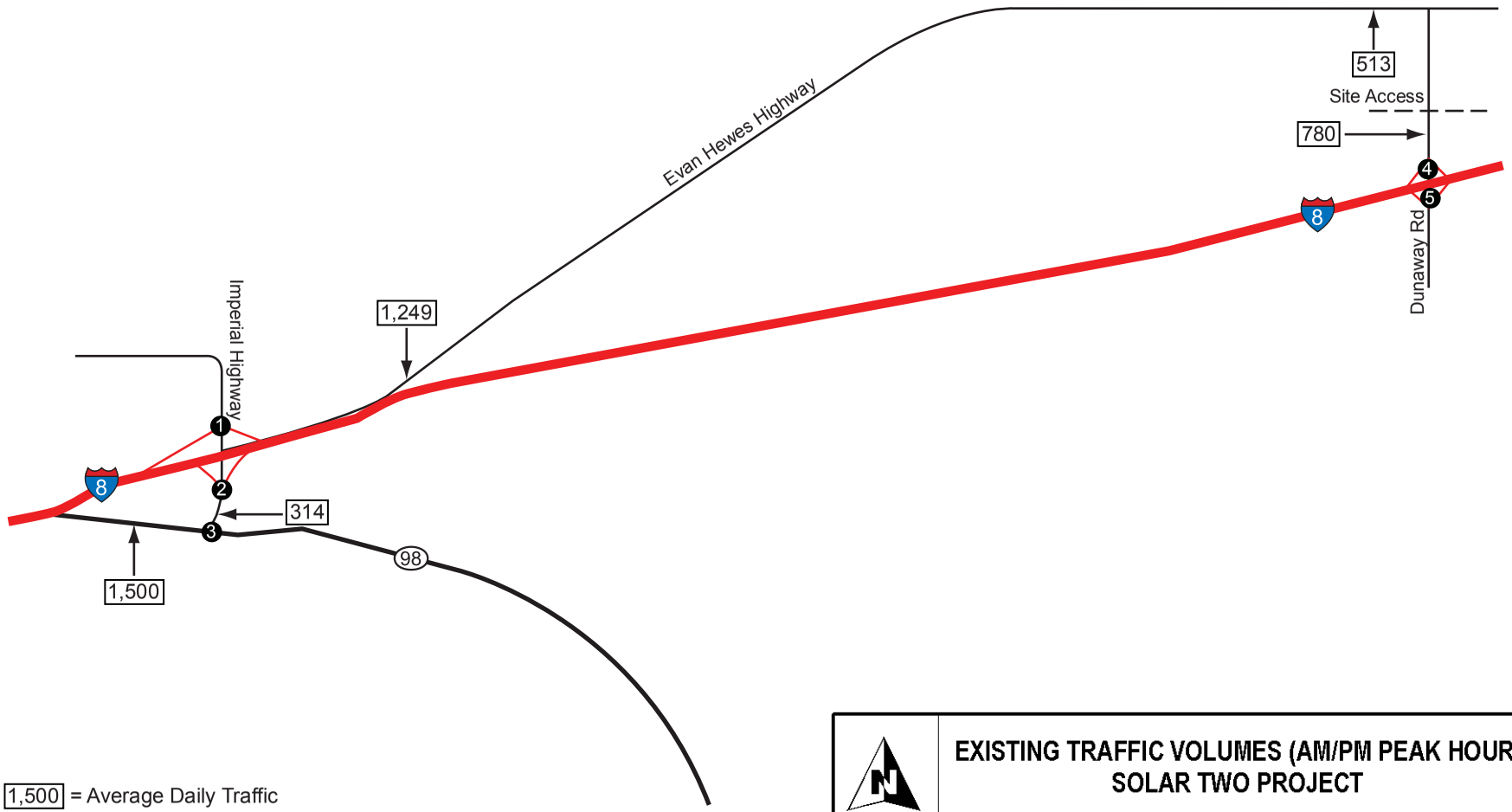


EXISTING INTERSECTION GEOMETRICS
SOLAR TWO PROJECT

URS	CREATED BY: MT	DATE: 05-15-08	FIG. NO:
	PM: AL	PROJ. NO: 27657102.00411	5.11-3

K:/2008/SES Solar 2/figure 5.11-3.ai





EXISTING TRAFFIC VOLUMES (AM/PM PEAK HOUR)
SOLAR TWO PROJECT

URS	CREATED BY: MT	DATE: 05-15-08	FIG. NO: 5.11-4
	PM: AL	PROJ. NO: 27657102.00411	

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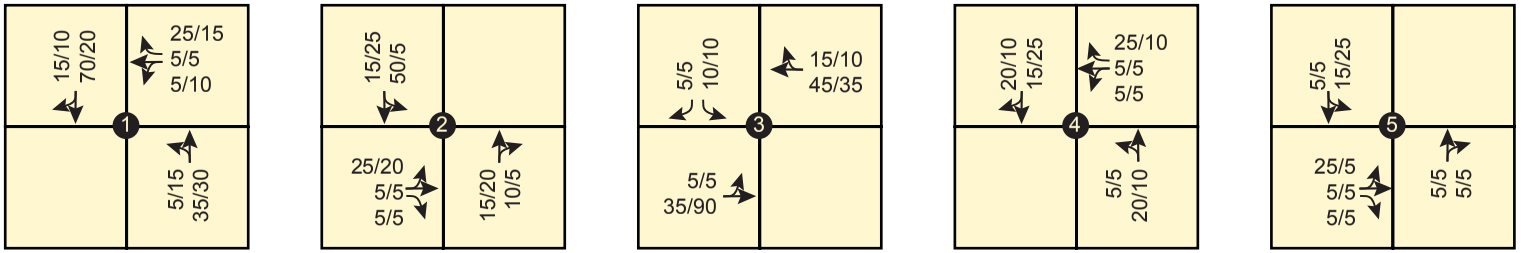

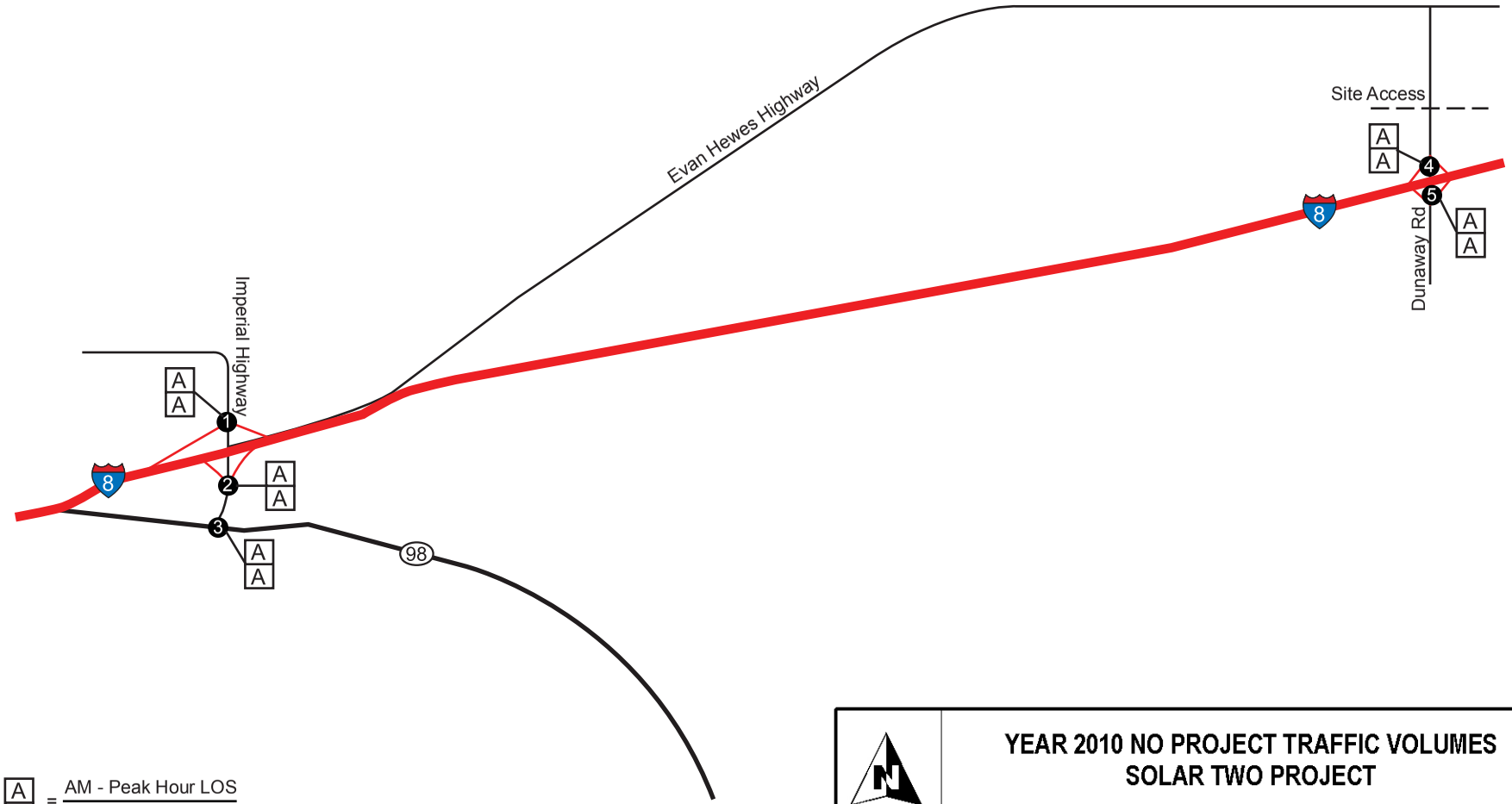

A/A = AM - Peak Hour LOS / PM - Peak Hour LOS

● Numbers rounded to nearest five.

YEAR 2010 NO PROJECT TRAFFIC VOLUMES
SOLAR TWO PROJECT

URS

CREATED BY: MT	DATE: 05-15-08	FIG. NO:
PM: AL	PROJ. NO: 27657102.00411	5.11-5

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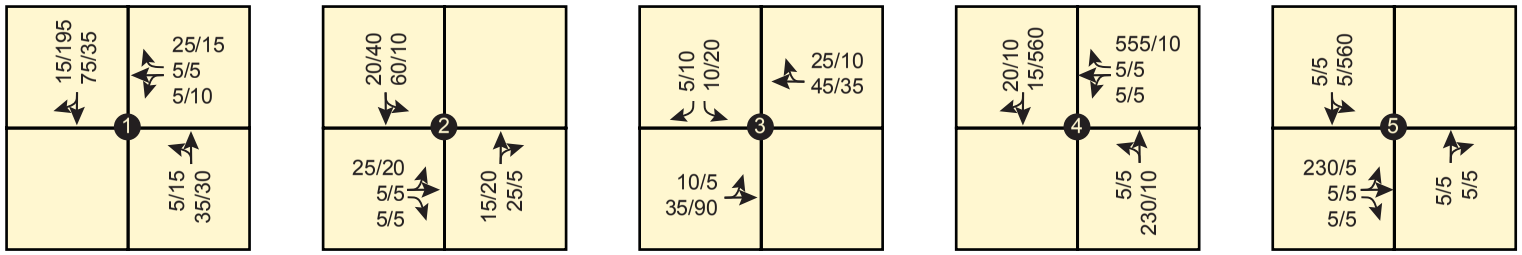

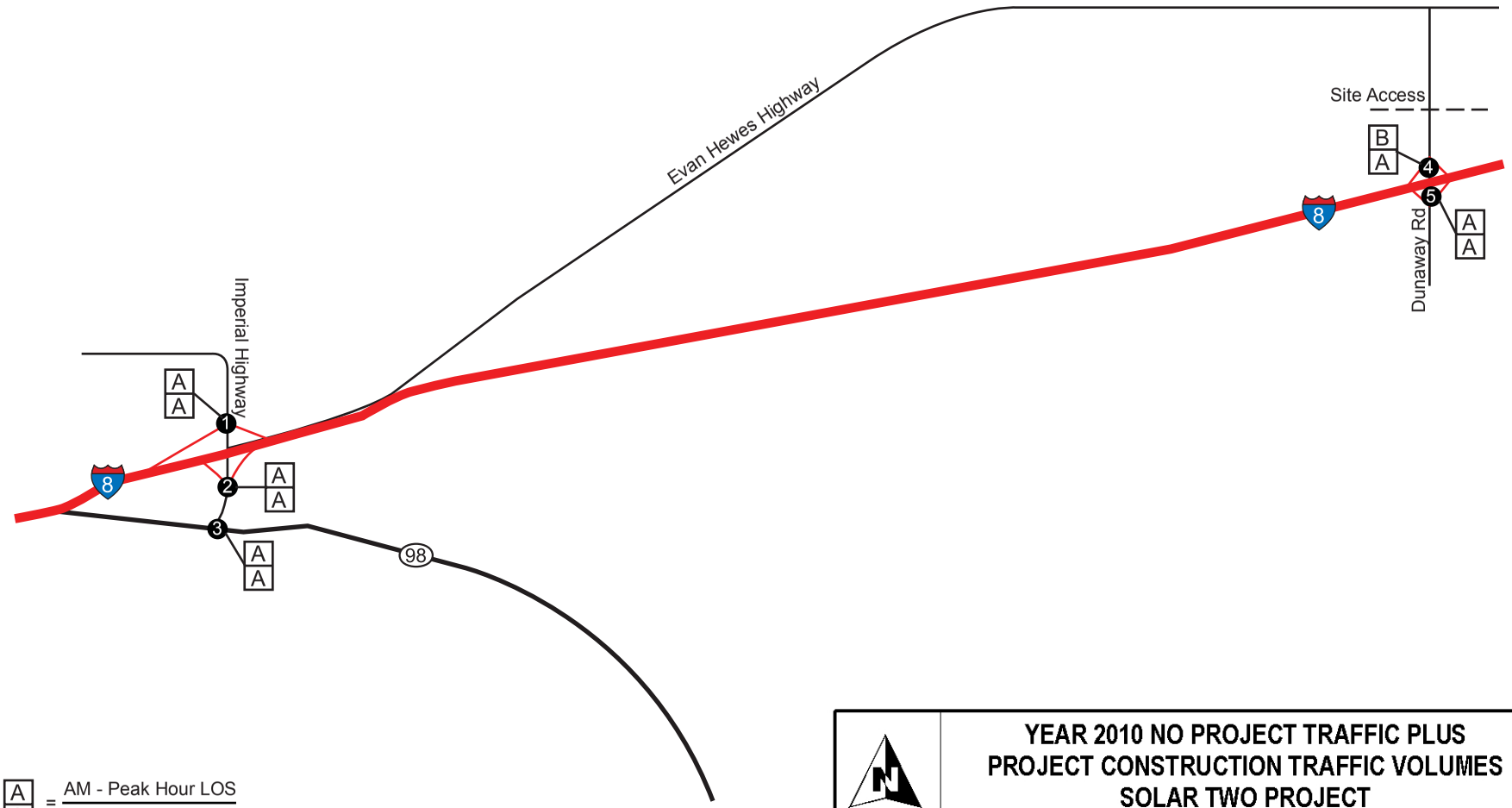

A/A = AM - Peak Hour LOS / PM - Peak Hour LOS

● Numbers rounded to nearest five.

YEAR 2010 NO PROJECT TRAFFIC PLUS PROJECT CONSTRUCTION TRAFFIC VOLUMES SOLAR TWO PROJECT

URS	CREATED BY: MT	DATE: 05-15-08	FIG. NO: 5.11-6
	PM: AL	PROJ. NO: 27657102.00411	

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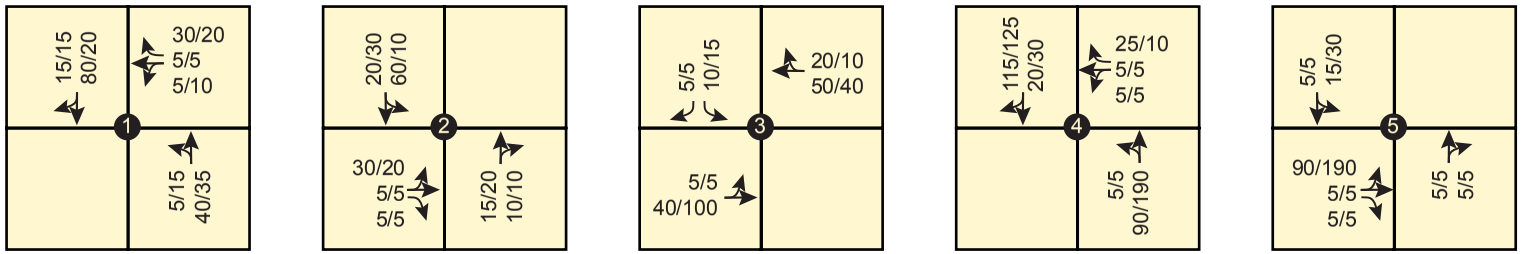

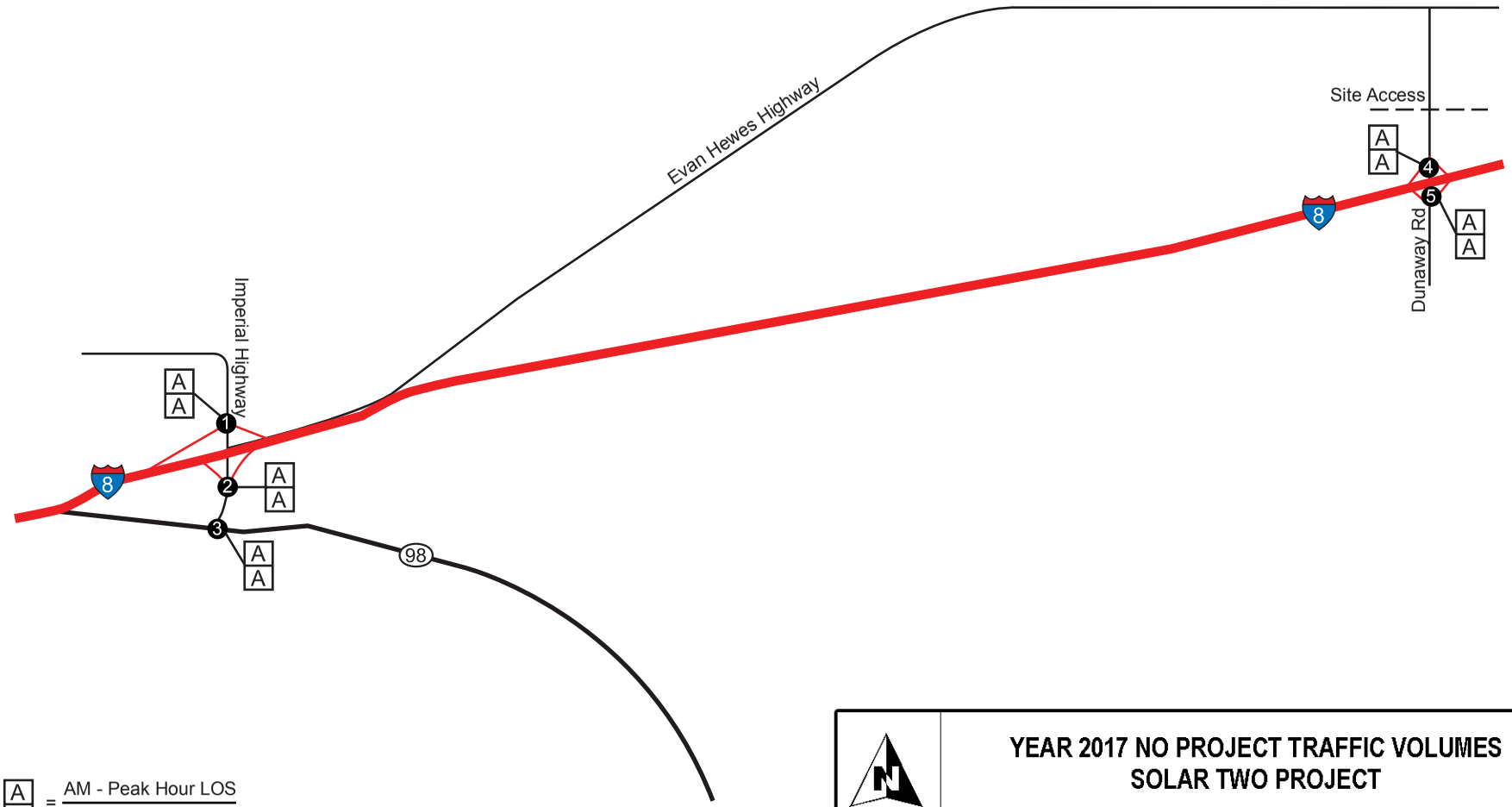

A/A = AM - Peak Hour LOS / PM - Peak Hour LOS

● Numbers rounded to nearest five.

YEAR 2017 NO PROJECT TRAFFIC VOLUMES
SOLAR TWO PROJECT

URS

CREATED BY: MT	DATE: 05-15-08	FIG. NO:
PM: AL	PROJ. NO: 27657102.00411	5.11-7

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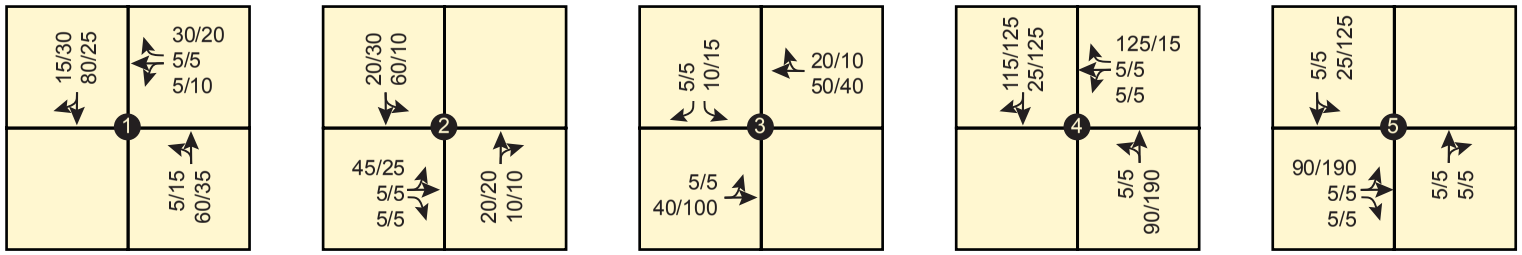

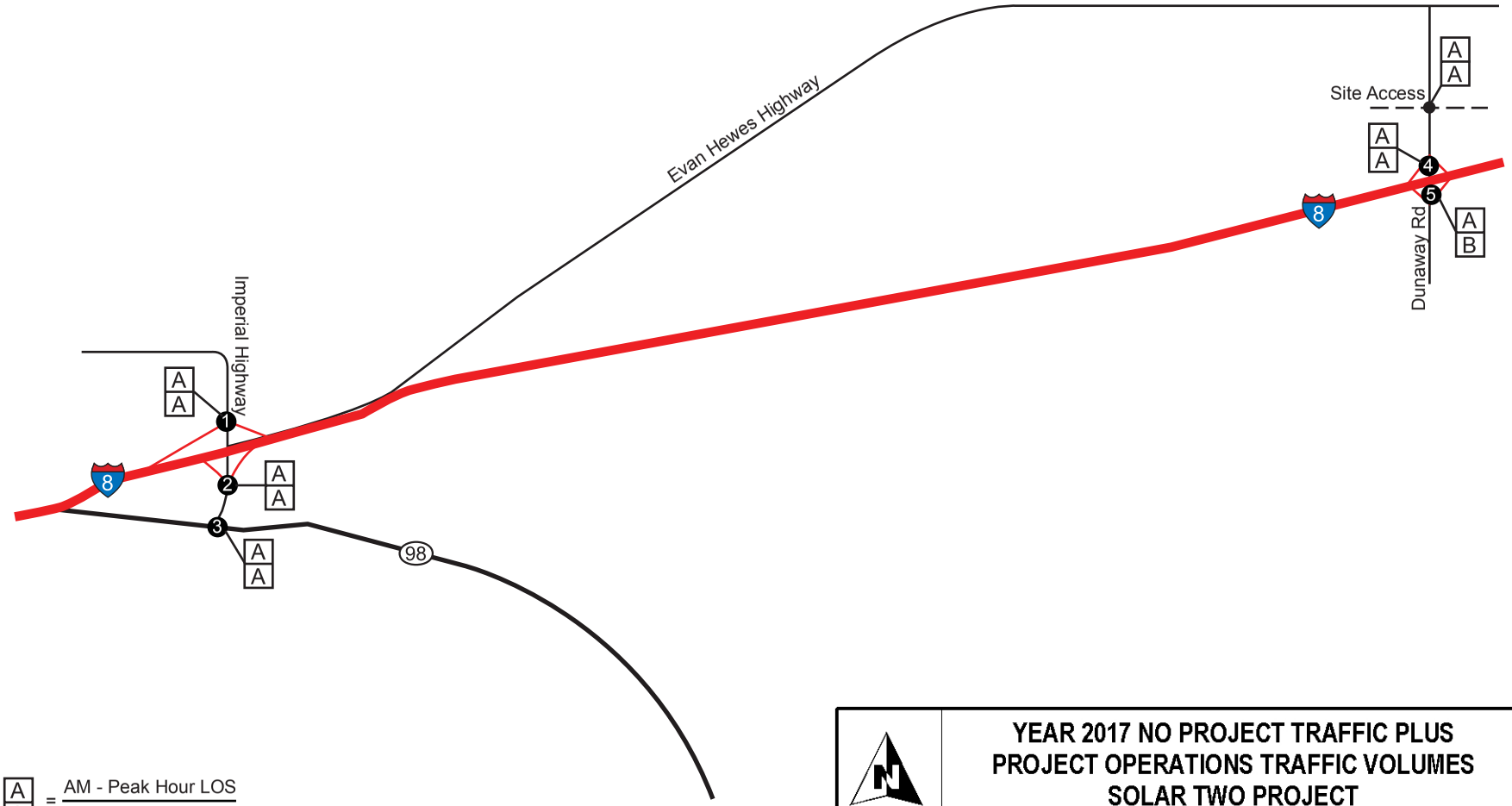

A/A = AM - Peak Hour LOS / PM - Peak Hour LOS

● Numbers rounded to nearest five.

YEAR 2017 NO PROJECT TRAFFIC PLUS PROJECT OPERATIONS TRAFFIC VOLUMES SOLAR TWO PROJECT

URS	CREATED BY: MT	DATE: 05-15-08	FIG. NO:
	PM: AL	PROJ. NO: 27657102.00411	5.11-8

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