7.10 TRAFFIC AND TRANSPORTATION

7.10 TRAFFIC AND TRANSPORTATION

This section assesses traffic and transportation impacts associated with the construction and operation of the proposed San Gabriel Generating Station (SGGS) project. The analysis primarily examines impacts on roadway levels of service expected during both construction and operation of the plant. Additional transportation factors examined in this section include parking, pedestrian and bicyclist impacts, safety, goods movement, and any potential impacts to air, rail, and waterborne transportation networks. This section also identifies and reviews applicable laws, regulations, ordinances, and standards (LORS) relevant to traffic and transportation activities.

The proposed project site and its immediate vicinity is classified Heavy Industrial, as shown in the Land Use Plan (Exhibit III-1) in the City of Rancho Cucamonga's General Plan.

Information sources include new roadway segment and intersection traffic counts collected within the project study area, data collected from the California Department of Transportation (Caltrans) traffic count database, field observations, and communications with local, regional, and federal level agencies. URS staff performed study area reconnaissance in January 2007 to document roadway characteristics, identify physical constraints, and assess general traffic conditions. The traffic study area limits for traffic and transportation are just north of Napa Street to the Interstate 10 (I-10)/Interstate 15 (I-15) freeway interchange along Etiwanda Avenue in the City of Rancho Cucamonga.

7.10.1 Affected Environment

7.10.1.1 Existing Transportation Facilities

Regional Roadway Facilities

The proposed project site lies in an industrial area northeast of the I-10/I-15 freeway interchange (Figure 7.10-1A).

Interstate 10 Freeway

Interstate 10 is an eight-lane, east-west freeway under the jurisdiction of Caltrans, which originates in Santa Monica and runs through Los Angeles, San Bernardino County, and beyond to the east.

Interstate 15 Freeway

Interstate 15 is an eight-lane, north-south freeway under the jurisdiction of Caltrans, which extends northbound from San Diego County, through Riverside and San Bernardino Counties and into Nevada and northward.

Local Roadway Facilities

The primary north-south roadway that provides access to and from the proposed project site between I-15 and I-10 is Etiwanda Avenue. Just south of the project site, 4th Street and 6th Street provide local east-west access. These roadways are briefly described below. The existing intersection geometries within the study area are illustrated on Figure 7.10-1B (at a scale of 1:24,000) and Figure 7.10-2, which shows the local roadway network in the vicinity of the proposed project site.

Etiwanda Avenue

Etiwanda Avenue is a north-south roadway that provides the most direct route to the proposed project site. It is classified as a major arterial between Foothill Boulevard and 4th Street and connects to the regional freeway system via an interchange with the I-15 freeway to the north and I-10 freeway to the

south. The roadway segment fronting the project site currently provides for one lane in each direction and widens to two lanes in each direction beginning at the southerly approach of Etiwanda Avenue just north the Napa Street intersection.

Within the Rancho Cucamonga city limits, Etiwanda Avenue is a designated truck route between 4th Street and Foothill Boulevard (located approximately 2 miles to the north of 4th street). Etiwanda Avenue is a designated Class 2 Bike route between 4th Street and Baseline Road (located approximately 3 miles to the north of 4th Street), and Class 1 Bike route between Baseline Road and 24th Street (located approximate 2 miles to the north of Baseline Road). The posted speed limit ranges from 50 to 55 mph.

4th Street (San Bernardino Avenue)

4th Street is an east-west roadway south of the proposed project site that is classified as a major divided arterial between Archibald Avenue and Etiwanda Avenue. It currently provides for two lanes in each direction within the vicinity of the proposed project site with either a raised median or two-way left turn painted median.

4th Street is a designated Class 2 Bike route between Hellman Avenue and Etiwanda Avenue. The posted speed limit ranges from 50 to 55 mph.

6th Street

6th Street is an east-west two-lane collector due south of the proposed project site. The roadway begins at the unsignalized T-intersection at Etiwanda Avenue and terminates near the railroad tracks to the west of the SGGS site.

Level of Service Concept

Level of Service (LOS) is identified through a letter designation, varying from LOS A to LOS F. Level of Service 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 7.10-1 describes the LOS performance designations for both signalized and unsignalized intersections. Tables 7.10-2 and 7.10-3 describe the generalized peak hour directional capacities for freeways and local roadways.

Existing Freeway/Roadway Levels of Service

An existing LOS analysis was conducted to assess the existing operational performance of selected roadway segments within the traffic study area. Table 7.10-4 provides the number and type of lanes, peak hour directional traffic volumes, LOS E threshold, and corresponding LOS of the project vicinity freeways and roadways in the traffic study area. Figure 7.10-3 shows the existing traffic study area and project vicinity freeway roadway peak-hour volumes.

As shown in Table 7.10-4, heavy directional a.m. and p.m. hour traffic contribute to LOS E and F conditions at the I-10 and I-15 study segments, respectively.

Etiwanda Avenue, north of Napa Street and south of 6th Street, and 6th Street west of Etiwanda Avenue, currently operate at LOS A. Each of these roadway segments currently has low to moderate traffic volume.

Table 7.10-1 Intersection Level of Service Descriptions		
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

Table 7.10-2
Generalized Peak Hourly/Directional Capacities For Freeways

Freeway Section	LOS Thresholds				
Lanes	**A**	**B**	**C**	**D**	**E**
4	1,400	2,150	3,070	3,710	3,990
6	2,090	3,230	4,610	5,570	5,990
8	2,790	4,310	6,140	7,420	7,980
10	3,490	5,390	7,680	9,280	9,980

Source: San Bernardino County CMP, 2003 Update.

Table 7.10-3
Generalized Peak Hourly/Directional Capacities For Roadways

Roadway Section		LOS Thresholds				
Lanes	**Cross-section**	**A**	**B**	**C**	**D**	**E**
2	Undivided	490	740	790	830	870
4	Divided	1,080	1,610	1,680	1,760	1,850
6	Divided	1,680	2,450	2,530	2,650	2,770
2	Divided + (Left Turn)	515	777	830	872	914
2	Divided (No Left)	417	629	672	706	740
4	Undivided + (Left)	1,026	1,530	1,596	1,672	1,758
6	Undivided + (Left)	1,596	2,328	2,404	2,518	2,632

Source: San Bernardino County CMP, 2003 Update.

Table 7.10-4
Freeway/Roadway Segment Level of Service
Existing Conditions

Roadway	Segment	Number and Type of Lanes	A.M. Peak Hour Volume[1]	P.M. Peak Hour Volume[1]	LOS Threshold (LOS E)[2]	A.M. Peak Hour (LOS)	P.M. Peak Hour (LOS)
Interstate 10	East of Etiwanda[3]	8-Lane Mixed Flow	5,220/ 7,830	8,700/ 5,800	7,980	B/E	F/C
Interstate 10	West of Etiwanda[3]	8-Lane Mixed Flow	5,616/ 8,424	9,360/ 6,240	7,980	B/F	F/C
Interstate 15	North of I-10[3]	8-Lane Mixed Flow	5,436/ 8,154	9,060/ 6,040	7,980	B/F	F/C
Interstate 15	South of I-10[3]	8-Lane Mixed Flow	5,760/ 8,640	9,600/ 6,400	7,980	C/F	F/C
Etiwanda Avenue	North of Napa	4-Lane Undivided	637/736	977/731	1,758	A/A	A/A
Etiwanda Avenue	South of 6th	4-Lane Undivided	642/765	968/943	1,758	A/A	A/A
6th Street	West of Etiwanda	2-Lane Undivided	69/58	159/66	870	A/A	A/A

[1] Northbound/southbound, eastbound/westbound peak hour directional traffic volume
[2] See Tables 7.10-2 and 7.10-3.
[3] Source: Caltrans, 2005

Existing Intersection Levels of Service

Table 7.10-5 presents intersection LOS and average vehicle delay under existing conditions. The LOS Calculation worksheets are provided in Appendix Q-2. Figure 7.10-4 shows the existing a.m. and p.m. peak-hour turning movement volumes at each study area intersection.

As shown in Table 7.10-5, all study intersections operate at LOS C or better under existing conditions.

Other Transportation Elements

Parking

Street parking is not allowed on the majority of local roads near the proposed project site.

Public Transportation

The main public transportation providers in the City of Rancho Cucamonga include Omnitrans fixed-route bus system and the Metrolink Commuter Rail Service. In addition, Omnitrans Access service is provided to qualified persons who meet the requirements of the Americans with Disabilities Act (ADA). The purpose of the Access service is to provide equal access to public transportation for persons who are physically or cognitively unable to use regular bus service. Access provides curb-to-curb service to complement the Omnitrans fixed-route bus system. The Access service area is defined as up to ¾ mile on either side of an existing bus route.

Table 7.10-5
Peak-Hour Intersection LOS – Existing Conditions

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	Average Delay (sec)	LOS	Average Delay (sec)	LOS
1. Etiwanda Avenue/Napa Street	11.6	B	11.4	B
2. Etiwanda Avenue/6th Street	12.7	B	13.1	B
3. Etiwanda Avenue/Wells	12.4	B	14.2	B
4. Etiwanda Avenue/4th Street/San Bernardino Avenue	28.0	C	30.4	C
5. Etiwanda Avenue/Valley Boulevard	14.5	B	12.9	B
6. Etiwanda Avenue/Ontario Mills Parkway	9.9	A	12.6	B
7. Etiwanda Avenue/I-10 Westbound Ramps	20.4	C	10.5	B
8. Etiwanda Avenue/I-10 Eastbound Ramps	21.5	C	13.6	B

Notes: Eastbound = eastbound; LOS = level of service; sec = second(s); Westbound = westbound

Bicycle and Pedestrian Circulation

Etiwanda Avenue is classified as a Class II Bike Route in the City of Rancho Cucamonga General Plan but Class II Bike Route improvements (i.e., signing and striping) are not yet implemented. Roadway improvements along Etiwanda Avenue near the vicinity of the proposed project site varies from unpaved roadway shoulders to concrete sidewalks with curbs and gutters fronting buildings and at or near major intersections. Only major signalized intersections offer provisions for pedestrian crossings.

Airports

Ontario International Airport is located approximately 3.5 miles southwest of the proposed project site, while Cable Airport is 9 miles northwest and Rialto Municipal is 7 miles northeast of the proposed project site.

Safety

A summary of the Traffic Collision History report (February 2003 to September 2006) provided by the City of Rancho Cucamonga Traffic Management Section for the requested segment of Etiwanda Avenue between 4th Street and Napa Street follows:

- Total Number of Collisions: 12
- Segment Length: 0.82 mile (4,352 feet)
- Average Daily Traffic: 15,300
- Length of time (in years): 3.75
- Collision Rate (Collision per Million Vehicle Miles): 0.70

Goods Movement

Freight Rail Service: The primary freight rail service provider within the study area is Burlington Northern & Santa Fe Railroad (BNSF). Various rail spurs serve the industrial/commercial facilities within the study area, including rail spurs crossing and leading into the proposed project site. The rail line

serving the project site is a dead end spur serving very few trains (1 per day) traveling at a very low speed (approximately 5 mph).

The main BNSF rail tracks running east-west to the north of the proposed project site are also used by Metrolink Commuter Rail via a "shared use agreement" that allows commuter trains to operate not only on public rights-of-way, but also on tracks owned by BNSF and/or Union Pacific (UP) railroads.

To the east of the EGS site, Logistics Center Fontana (LCF) operates as a major transload center of commodities and is part of the national BNSF Transload Network, which provides dedicated switching services to route inbound railcars to appropriate track locations, thus ensuring shipments reach their destination quickly. BNSF and its transload operators also provide inventory management and control for every shipping need, including provisions for pick-up or delivery of goods via truck.

Truck Access: The heavy industrial land uses near the proposed project site generate truck traffic in addition to local commute trips. Truck traffic associated with construction of the power plant would access the project site from I-10 by heading north on Etiwanda Avenue, then west on 6th Street and north via an access road to the site. Traffic during operations would access the plant via the Etiwanda Generating Station (EGS) entrance on Etiwanda Avenue.

California Speedway

The California Speedway, which is a regionally significant facility and one the West Coast's premier sports and entertainment venues, is located at 9300 Cherry Avenue in the City of Fontana and less than 2 miles due east of the SGGS site. The landmark venue hosts the NASCAR Racing Circuit Races, Hot Rod, Superbike, truck racing, and a Historic Sports Car Festival. The current 2007 California Speedway schedule shows a total of 25 days of revenue-generating events throughout the year.

Regional access to the speedway is provided via the Cherry Avenue/I-10 freeway interchange and at the I-15 interchanges at Foothill Boulevard and 4th Street. Local access is provided via Cherry Avenue, Foothill Boulevard, and San Bernardino Avenue. The easterly extension of Napa Avenue originating from Etiwanda Avenue and the EGS site ends on the west perimeter fenceline of the speedway.

A dedicated Metrolink Commuter Train platform at the California Speedway is located along the backstretch of the speedway's oval. Guests exit the trains and head south towards the facility through Gate 4. Guest Express Trams are offered during all NASCAR NEXTEL Cup Series events at California Speedway. These trams take guests to a variety of locations throughout the Speedway, including to and from the Metrolink platform. This is a free service offered by the California Speedway. The tram service operates until one hour past the end of each day's final race.

According to the California Speedway management, on Fridays and Saturdays of each race weekend, many regularly scheduled trains on Metrolink's San Bernardino line may make special stops at California Speedway. The San Bernardino line operates between San Bernardino and Los Angeles on Fridays and between Riverside-San Bernardino and Los Angeles on Saturdays.

Beginning in 2007, Sunday charter trains will operate directly to California Speedway (e.g., the first charter train ran on February 25, 2007 for the Auto Club 500). These chartered trains, containing over 3,000 seats, will operate from as far away as Oxnard, Simi Valley, Oceanside, Irvine, Lancaster, Santa Clarita, Los Angeles, and dozens of other stations around Southern California directly to the California Speedway.

Peak Hour Signal Warrant

The traffic study field review found that three of the eight study intersections currently have no traffic signals. A traffic signal warrant analysis was conducted and determined that these three unsignalized study intersections currently do not meet peak-hour traffic volume signal warrants as shown in Table 7.10-6. The Existing Conditions traffic signal warrant worksheets are provided in Appendix Q-7.

Table 7.10-6
Peak-Hour Signal Warrant Unsignalized Intersections – Existing Conditions

Intersection[1]	A.M. Peak Hour Warrant Met?		P.M. Peak Hour Warrant Met?	
	Yes	No	Yes	No
2. Etiwanda Avenue/6th Street		X		X
3. Etiwanda Avenue/Wells		X		X
6. Etiwanda Avenue/Ontario Mills Parkway		X		X

7.10.1.2 Planned City Transportation Improvements

The City of Rancho Cucamonga does not have any planned transportation improvements in the immediate future within the vicinity of the study area.

7.10.2 Environmental Consequences

This section discusses potential transportation-related impacts from the construction and operation of the proposed SGGS. A Year 2009 traffic analysis was conducted for project construction traffic impact analysis, and Year 2010 traffic analysis was conducted for project operations traffic impact analysis. Projections are provided for both the No Project and with Project Operations conditions for each of these two years.

The following improvements are planned and proposed by the Applicant in conjunction with the construction and operation of the SGGS:

- The proposed project will use several areas within the EGS property for temporary construction laydown areas (see Figure 2.7-4a in Chapter 2, Facility Description and Location). Access between the onsite laydown areas and the proposed project site will be on internal plant roads, unless noted otherwise.

- Within the EGS site, a bridge will be constructed across Chadwick Channel on the main accessway into the proposed power plant. Currently, the existing EGS has two bridges located farther north within the site. However, neither of those bridges is wide enough or has the carrying capacity required to move heavy equipment. The new bridge will be 30 feet wide by 100 feet long. The bridge will constructed of reinforced concrete and will be designed to carry a transformer moved using a multi-axle carrier. Conceptual design for the new bridge is shown on Figure 2.7-5.

- Various improvements for the onsite (Areas 1 to 9) laydown areas and offsite construction parking and laydown area are described in greater detail in Chapter 2, Facility Description and Location (see Figure 2.7-4b).

7.10.2.1 Thresholds of Significance

Significance criteria were developed based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, which identifies potentially significant project impacts. A significant traffic-related project impact would occur if the proposed project significantly changed the operating conditions on the surrounding roadway network. A freeway/roadway segment and intersection LOS analysis was conducted to assess operational performance of the traffic study area freeways/roadways and intersections during construction and operation of the project. For LOS, the applicable significance threshold was based on the San Bernardino Congestion Management Program (CMP) 2003 Update and City of Rancho Cucamonga requirements.

CMP Level of Service Standards

The following discussion of level of service (LOS) standards was excerpted from the San Bernardino County CMP 2003 Update:

> **Objective 2.3** Set level of service standards that provide a reasonable balance between mobility and the cost of building and operating the transportation system.
>
> **Policy 2.3.1** – Establish level of service E or the current level, whichever is farthest from LOS A, as the LOS standard for intersections or segments on the CMP system of roadways.

The responsibility to implement Policy 2.3.1 belongs to the Congestion Management Agency Board and local jurisdictions.

The SGGS study intersection of Etiwanda Avenue/4th Street is one of the CMP intersections listed to be monitored in Table 2-1 of the San Bernardino County CMP.

A significant traffic impact occurs:

- When pre-project (Base) LOS A, B, C, and D becomes LOS E or F with project
- When pre-project (Base) LOS E becomes LOS F with project

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."

Accordingly, the San Bernardino County Association of Governments (SANBAG), the Congestion Management Agency with regional jurisdiction requires that:

"The LOS threshold for state highways will be the same as the jurisdiction where the highway is located but no greater than 45 second average delay per vehicle in the peak hour (middle of LOS D). Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with

Caltrans to determine the appropriate target LOS. If an existing state highway is operating at less than the appropriate target LOS, the existing LOS should be maintained."

Based on the above requirements the following conditions apply in the determination of significant State Highway impacts:

- Desired LOS is LOS D
- When pre-project (Base) LOS A, B, C, and D becomes LOS E or F with project
- When pre-project (Base) LOS E becomes LOS F with project

Local Level of Service Standard

The City of Rancho Cucamonga strives to maintain LOS D or better at all intersections within the City at peak hours except for seven intersections which may operate at LOS E during peak hours upon completion of maximum feasible improvements.

One of the SGGS study intersections (Etiwanda Avenue/4th Street) is included in the seven intersections noted above which may operate at LOS E.

The following conditions apply in the determination of significant traffic impacts within the City of Rancho Cucamonga.

- Desired LOS is LOS D (ideal) with exception to seven named intersections where LOS E is allowed.
- When pre-project (Base) LOS A, B, C, and D becomes LOS E or F with project
- When pre-project (Base) LOS E becomes LOS F with project

The City of Ontario strives to maintain LOS D (with V/C < 1.00) or better operating conditions for study intersections. Roadway segments are evaluated using the 2003 San Bernardino County CMP Generalized Peak Hour/Peak Direction Level of Service Standards.

The following conditions apply in the determination of significant traffic impacts within the City of Ontario.

- Desired LOS is LOS D (with Volume-to-Capacity (V/C) Ratio less than 1.0)
- When pre-project (Base) LOS A, B, C, D (V/C< 1.0) becomes LOS D (V/C >1.0) or LOS E or LOS F with project
- When pre-project (Base) LOS E becomes LOS F with project

Significance issues for the other transportation elements include:

- Additional Vehicular Traffic: Would the additional traffic generated by the proposed project adversely affect operating conditions (i.e., LOS) on local and regional roadways?

- Public Transit: Would the additional traffic generated by the proposed project impede public transit operations in the vicinity of the project?

- Bicycle and Pedestrian Circulation: Would the additional traffic generated by the proposed project obstruct bicycle and pedestrian access to and from the project site or along adjacent bicycle and pedestrian routes?

- Parking Facilities: Would the additional traffic generated by the proposed project consume parking in proximity to the project site?

- Goods Movement: Would the additional traffic generated by the proposed project hinder goods movement along local and regional roadways?

- Safety: Would the traffic generated by the proposed project impose any safety concerns, such as a significant increase in crashes?

- Air, Rail, and Waterborne Traffic: Would the traffic generated by the proposed project interfere with air, rail, or waterborne traffic, or access to these transportation modes?

7.10.2.2 Construction Impacts

Construction Activities and Traffic Forecast

Mobilization of the proposed project is expected to ensue immediately upon receipt of certification. Onsite construction would commence in September 2008, and would be completed by July 2010, a total of 22 months, as shown on Figure 2.7-1 in Chapter 2, Facility Description and Location. Commercial operation would begin by July 1, 2010. The schedule has been estimated on a single shift, 10-hour day and 50-hour week. However, longer work days or work-weeks may be necessary to make up schedule deficiencies or to complete critical construction activities. During the startup and testing phase of the project, some activities may continue 24 hours per day, 7 days per week. Construction operations are expected to take place between 6:00 a.m. and 6:00 p.m.

Projected construction staff by month is shown in Table 2.7-1 and on Figure 2.7-2 in Chapter 2. The onsite workforce will consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. The estimated construction workforce (craft) by trade is also shown in Table 2.7-1. The onsite workforce is expected to reach its peak of 974 workers and 40 contractor staff resulting in 1,014 individuals during the 12th month of construction. A proposed worker carpooling program (assumed at 11% single trip reduction) would result in a reduction of trips from 1,014 to 900 one-way vehicle trips. The number of construction workers (craft) would be expected to be less than 400 for approximately 17 months out of the 22-month construction period. Construction access to the site will be via Etiwanda Avenue and 6th Street. The estimated average and peak number of construction staff (passenger) vehicle round trips per day and the estimated number of average and peak truck deliveries per day are shown in Table 2.7-2 and on Figure 2.7-3. Truck deliveries will normally be on weekdays between 7:00 a.m. and 5:00 p.m.

All of the pipeline construction associated with the proposed project will be within the 60-acre EGS property with the exception of a new 20-inch diameter gas line connection to the existing offsite gas line, from Southern California Gas Company (SoCalGas), the current supplier of natural gas to the EGS. The gas supply will be delivered to the project site via a pipeline interconnected to the SoCalGas transmission line that runs approximately 200 feet to the east of the property line. SoCalGas will provide a pipeline tap and supply interconnection and a pressure reducing/metering station. The pressure reducing/metering station will be located within the EGS property.

Construction of the natural gas pipeline across Etiwanda Avenue would require trenching and potentially require alternating partial closure of the traveled way while trenching work is conducted on the other half of the roadway. Depending on roadway median conditions, construction work on the east half of the roadway could potentially shift at least one lane of northbound traffic to the west and vice versa to avoid total directional roadway closure.

Laying out long lengths of gas pipeline could potentially require short-term full closure of Etiwanda Avenue and will be scheduled during off-peak hours. All construction activities shall comply with City requirements including securing the necessary permits. Provisions for detour might be required to alleviate traffic. Estimated duration for the pipeline connection is approximately one month.

During construction, all traffic signs, equipments and control measures shall conform to the provisions specified in the Caltrans Traffic Manual (Red Book) and the Manual of Uniform Traffic Control Device. Specific requirements will be identified during permit application process.

Signalized intersection analysis follows the procedures outlined in the *2000 Highway Capacity Manual* (HCM), *Transportation Research Board Special Report 209*. This method defines LOS in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption, and lost travel time. This technique uses 1,900 vehicles per hour per lane (vphpl) as the maximum saturation volume of an intersection. This saturation volume is adjusted to account for lane width, on-street parking, pedestrians, traffic composition (i.e., percentage trucks), and shared lane movements (i.e., through and right-turn movements originating from the same lane). The LOS criteria used for this technique are described in Table 7.10-1. The computerized intersection analysis was performed with the Traffix 7.6 R1 software package (Dowling Associates, 2000).

Unsignalized intersections, including two-way and all-way stop controlled intersections, were analyzed using the 2000 HCM (Section 10) unsignalized intersection analysis methodology. The Traffix 7.6 R1 software supports this methodology and was used to produce LOS results. The LOS For a two-way stop controlled (TWSC) intersection is determined by the computed or measured control delay and is defined for each minor movement.

Trip Generation

Based on information provided by the Applicant, the traffic analyses took into consideration that the 900 peak worker trips (with worker carpooling discussed above) generated by construction personnel for the SGGS would not arrive at the same time during the morning peak period (7:00 – 9:00 a.m.) nor depart at the same time during the evening peak period (4:00 – 6:00 p.m.). Approximately 40 percent of the workers are expected to arrive prior to the morning peak period and leave the site during the evening peak period after a 10-hour work schedule.

Because truck deliveries likely will arrive and depart throughout the day, half of the daily truck trips were assumed to occur during the a.m. and p.m. peak hours, respectively.

The above assumptions allow for a judicious worse-case assessment of the potential project-related traffic impacts. The estimated project construction trips projected to be generated by the SGGS during the a.m. and p.m. peak hour traffic analysis scenarios are presented in Table 7.10-7.

Table 7.10-7
Project Construction Trip Generation

Vehicle Type	Peak Daily Round Trips	A.M. Peak TRIPS			P.M. Peak TRIPS		
		Inbound	Outbound	TOTAL	Inbound	Outbound	TOTAL
Construction Worker Vehicles [1]	1,800 [3]	545	0	545	0	361	361
Delivery Vehicles (including heavy trucks) [2]	38 [4]	10	10	20	9	9	18

[1] Peak workforce was conservatively analyzed at 1014 worker trips. During the morning peak hour of the peak four months of construction 60 percent of workers are projected to commute during the morning peak period. Forty (40) percent of the workers are projected to leave during the evening peak hour.
[2] Delivery vehicles were adjusted into Passenger Car Equivalent (1 Heavy Vehicle = 3 PCE) vehicle in the traffic impact analysis.
[3] Total round trips from 900 worker trips
[4] Total round trips from 19 delivery vehicles

The project trip generation data in Table 7.10-7 show the resultant trips generated by construction personnel and delivery trucks. The estimation of the project trip generation was based on the following key assumptions:

- Project construction hours = 6 a.m. to 6 p.m.
- Passenger car equivalent (PCE) per delivery truck = 3 PCE
- Total peak workforce = 974 workers plus 40 contractor staff (with potential carpooling = 900 workers)

Table 7.10-8 summarizes and compares the average and peak daily construction trips during the SGGS construction.

Table 7.10-8
Average and Peak Daily Construction Traffic

Vehicle Type	Average Daily Trips	Peak Daily Trips[1]
Construction Worker Vehicles[2]	400	900
Delivery Vehicles (including heavy trucks)	15	19[3]
Total	**415**	**919**

Notes:

[1]"Peak" refers to the scheduled peak construction month, estimated to be August 2009. Peak workforce during this month is expected to be 974 persons plus 40 contractor staff, for a total of 1,014 workers.

[2]Assumes that a small portion of the workforce will carpool (i.e., there would be approximately 900 vehicles for 1,014 workers during the peak month or approximately 11 percent would carpool).

3 See Figure 2.7-3. For the peak worker month (August 2009), the estimated number of delivery trucks is 19.

Trip Distribution and Assignment

In order to access the proposed construction worker parking and laydown area to the west of the project site, the recommended route for incoming workers will be to head north on Etiwanda Avenue and then west on 6th Street to the temporary access road, and then north on the temporary access road to the parking lot. Construction workers would park at this site and be bused to and from the proposed power plant site. The buses would exit the parking lot, then turn left onto the temporary access road.

The project trip distribution and assignment assumes the construction workforce would be primarily supplied by an extensive network of union labor pool (assumed origin: from west I-10 55 percent, east I-10 10 percent, north I-15 5 percent, and south I-15 30 percent). Based on these parameters, a computerized traffic analysis model (TRAFFIX) was used in the trip distribution and evaluation of freeway, roadway and intersection performance using the LOS analysis tables presented in the previous section.

Freeway Roadway Level of Service During Project Construction

Table 7.10-9 presents the peak hour directional freeway/roadway segment LOS under Year 2009 No Project conditions. Figure 7.10-5 shows Year 2009 No Project traffic study area and project vicinity freeway/roadway segment traffic volumes.

Table 7.10-9
Freeway/Roadway Segment Level of Service
Year 2009 No Project Conditions

Freeway/ Roadway	Segment	Cross-Section (Lanage)	A.M. Peak Hour Volume[1]	P.M. Peak Hour Volume[1]	A.M. Peak Hour (LOS)	P.M. Peak Hour (LOS)
Interstate 10	East of Etiwanda[2]	8-Lane Mixed Flow	5,272/7,908	8,787/5,858	B/E	F/C
Interstate 10	West of Etiwanda[2]	8-Lane Mixed Flow	5,672/8,508	9,454/6,302	C/F	F/C
Interstate 15	North of I-10[2]	8-Lane Mixed Flow	5,490/8,236	9,151/6,100	B/F	F/C
Interstate 15	South of I-10[2]	8-Lane Mixed Flow	5,818/8,726	9,696/6,464	C/F	F/D
Etiwanda Avenue	North of Napa	4-Lane Undivided	643/743	987/738	A/A	A/A
Etiwanda Avenue	South of 6th	4-Lane Undivided	648/773	977/952	A/A	A/A
6th Street	West of Etiwanda	2-Lane Undivided	70/59	161/67	A/A	A/A

[1] Northbound/southbound, eastbound/westbound peak hour directional traffic volume
[2] Source: Caltrans, 2005
[3] See Tables 7.10-2 and 7.10-3

The four study freeway segments are forecast to operate at LOS E or F on some directions during the a.m. and p.m. peak hours. These findings are consistent with the current traffic patterns within the study area:

- Interstate 10 (East of Etiwanda) – LOS E a.m. (westbound), LOS F p.m. (eastbound)
- Interstate 10 (West of Etiwanda) – LOS F a.m. (westbound), LOS F p.m. (eastbound)
- Interstate 15 (North of I-10) – LOS F a.m. (southbound), LOS F p.m. (northbound)
- Interstate 10 (South of I-10) – LOS F a.m. (southbound), LOS F p.m. (northbound)

As shown in Table 7.10-9, all local study roadway segments are forecast to operate at LOS A under Year 2009 No Project conditions.

Table 7.10-10 presents the peak-hour directional freeway/roadway segment LOS under Year 2009 Project Construction conditions. Figure 7.10-6 shows Year 2009 Project Construction roadway segment traffic volumes.

The four study freeway segments are forecast to continue to operate at LOS E or F on the same segments as 2009 No Project conditions during the a.m. and p.m. peak hours. None of study freeway segment's LOS would deteriorate to a worse LOS to cause a significant impact. The incremental change in directional traffic volume associated with project construction added trips at the LOS E or F segments is provided below in context to 2009 No Project conditions.

- Interstate 10 (East of Etiwanda) – LOS E a.m. (less than 1 percent added to westbound I-10), LOS F p.m. (less than 1 percent added to eastbound I-10)

- Interstate 10 (West of Etiwanda) – LOS F a.m. (less than 1 percent added to westbound I-10), LOS F p.m. (less than 1 percent added to eastbound I-10)

Table 7.10-10
Freeway/Roadway Segment Level of Service
Year 2009 Project Construction Conditions

Roadway/ Freeway	Segment	Cross-Section (Lanage)	A.M. Peak Hour Volume[1]	P.M. Peak Hour Volume[1]	A.M. Peak Hour (LOS)	P.M. Peak Hour (LOS)
Interstate 10	East of Etiwanda[2]	8-Lane Mixed Flow	5,272/ 7,963	8,823/ 5,858	B/E	F/C
Interstate 10	West of Etiwanda[2]	8-Lane Mixed Flow	6,192/ 8,538	9,481/ 6,690	C/F	F/D
Interstate 15	North of I-10[2]	8-Lane Mixed Flow	5,490/ 8,278	9,169/ 6,100	B/F	F/C
Interstate 15	South of I-10[2]	8-Lane Mixed Flow	5,997/ 8,741	9,709/ 6,585	C/F	F/D
Etiwanda Avenue	North of Napa	4-Lane Undivided	643/743	987/738	A/A	A/A
Etiwanda Avenue	South of 6th	4-Lane Undivided	1,223/803	1,004/ 1,340	B/A	A/C
6th Street	West of Etiwanda	2-Lane Undivided	100/634	549/94	A/C	B/A

[1] Northbound/southbound, eastbound/westbound peak hour directional traffic volume
[2] Source: Caltrans, 2005

- Interstate 15 (North of I-10) – LOS F a.m. (less than 1 percent added to southbound I-15), LOS F p.m. (less than 1 percent added to northbound I-15)
- Interstate 15 (South of I-10) – LOS F a.m. (less than 1 percent added to southbound I-15), LOS F p.m. (less than 1 percent added to northbound I-15)

As shown in Table 7.10-10, none of the project study roadway segments would be significantly impacted by project construction added trips during either a.m. or p.m. peak period. All local study roadway segments are forecast to operate at LOS C or better.

Intersection Level of Service During Project Construction (2009)

Table 7.10-11 presents peak hour intersection LOS and average vehicle delay results under Year 2009 No Project conditions. The LOS Calculation worksheets are provided in Appendix Q-3. Figure 7.10-7 shows Year 2009 No Project a.m. and p.m. peak-hour turning movement volumes at each study area intersection.

As shown in Table 7.10-11, all study intersections would operate at LOS C or better under Year 2009 No Project conditions.

Table 7.10-12 presents peak hour intersection LOS and average vehicle delay results under Year 2009 project construction conditions. The LOS Calculation worksheets are provided in Appendix Q-4. Figure 7.10-8 shows Year 2009 Project Construction conditions a.m. and p.m. peak-hour turning movement volumes at each study area intersection.

Table 7.10-11
Peak-Hour Intersection LOS – Year 2009 No Project Conditions

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	Average Delay (sec)	LOS	Average Delay (sec)	LOS
1. Etiwanda Avenue/Napa Street	11.6	B	11.4	B
2. Etiwanda Avenue/6th Street	12.8	B	13.2	B
3. Etiwanda Avenue/Wells	12.4	B	14.3	B
4. Etiwanda Avenue/4th Street/San Bernardino Avenue	28.0	C	30.5	C
5. Etiwanda Avenue/Valley Boulevard	14.5	B	13.0	B
6. Etiwanda Avenue/Ontario Mills Parkway	9.9	A	12.6	B
7. Etiwanda Avenue/I-10 Westbound Ramps	20.5	C	10.6	B
8. Etiwanda Avenue/I-10 Eastbound Ramps	21.5	C	13.7	B

Table 7.10-12
Peak-Hour Intersection LOS – Year 2009 Project Construction Conditions

Intersection	Acceptable LOS	A.M. Peak Hour		P.M. Peak Hour	
		Average Delay (sec)	LOS	Average Delay (sec)	LOS
1. Etiwanda Avenue/Napa Street	D	11.6	B	11.4	B
2. Etiwanda Avenue/6th Street	D	34.9	D	19.7	C
3. Etiwanda Avenue/Wells	D	14.4	B	20.9	C
4. Etiwanda Avenue/4th Street/San Bernardino Avenue	D	24.8	C	31.2	C
5. Etiwanda Avenue/Valley Boulevard	D	11.6	B	12.2	B
6. Etiwanda Avenue/Ontario Mills Parkway	D	10.0	A	14.6	B
7. Etiwanda Avenue/I-10 Westbound Ramps	D	18.6	B	10.4	B
8. Etiwanda Avenue/I-10 Eastbound Ramps	D	20.5	C	13.8	B

Notes: LOS = level of service; sec = second(s)

As shown in Table 7.10-12, all study intersections, except Etiwanda Avenue/6th Street, would operate at LOS C under Year 2009 construction conditions. Etiwanda Avenue/6th Street would operate at LOS D during the a.m. peak period, but operate at LOS C during the p.m. peak period; LOS D is an acceptable level within the City of Ranch Cucamonga. In addition, the LOS D condition would only be expected to occur for approximately 4 months out of the 22-month construction period. During the four month peak

construction period, no project study intersection is forecast to be significantly impacted by project construction added trips during either a.m. or p.m. peak hour.

Peak-Hour Signal Warrant

Tables 7.10-13 and 7.10-14 summarize the Year 2009 No Project and Year 2009 Project Construction peak-hour signal warrants on three 2-way stop controlled intersections in the study area.

Table 7.10-13
Peak-Hour Signal Warrant – Year 2009 No Project

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	Warrant Met?		Warrant Met?	
	Yes	No	Yes	No
2. Etiwanda Avenue/6th Street		X		X
3. Etiwanda Avenue/Wells		X		X
6. Etiwanda Avenue/Ontario Mills Parkway		X		X

Table 7.10-14
Peak-Hour Signal Warrant – Year 2009 Project Construction

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	Warrant Met?		Warrant Met?	
	Yes	No	Yes	No
2. Etiwanda Avenue/6th Street		X		X
3. Etiwanda Avenue/Wells		X		X
6. Etiwanda Avenue/Ontario Mills Parkway		X		X

As shown in Tables 7.10-13 and 7.10-14, the three 2-way stop controlled intersections do not meet peak traffic signal warrants during either Year 2009 No Project or Year 2009 project construction conditions. The detailed peak-hour signal warrant worksheets are included in Appendices Q-8 and Q-9.

Parking Facilities

Both onsite and offsite parking would be provided for staff and construction workers. The proposed project would provide a construction laydown and construction contractor parking on a property west of the SGGS site and just east of I-15 (see Figure 2.2-1).

Public Transportation

The following public transportation providers would traverse the study area or indirectly serve the SGGS site:

- Ominitrans Bus Route 61 (Fontana-Ontario Mills-Pomona) traverses the study area along 4th Street to the south of the proposed project site.

- Ominitrans Bus Route 66 (Fontana-Foothill-Montclair) traverses the study area along Foothill Boulevard to the north of the proposed project site.

- The Metrolink Commuter Rail track crosses Etiwanda Avenue at an at-grade crossing near the SGGS site just north of Napa Avenue. The nearest Metrolink stations are the Rancho Cucamonga Station west of I-15 and the Fontana Station east of the proposed project site.

Based on the limited conflicts with transit and rail crossings, the proposed project is not anticipated to cause significant impacts to public transportation.

Bicycle and Pedestrian Circulation

Etiwanda Avenue is classified as a Class II Bike Route in the City of Rancho Cucamonga General Plan. According to the General Plan, Class II bikeways are located next to the curb or edge of paved roadways and are a minimum of 5 feet in width. They include bike lane signage, special lane lines, and special pavement markings. The traffic study field review found that Class II Bike amenities have not yet been implemented and current bike use is assumed to be minimal, as no bicyclists were observed during the field review process. Due to minimal pedestrian activity and lack of bikeway amenities to encourage bicycle use, construction-related traffic is anticipated to have no impact on local pedestrian or bicycle access.

Goods Movement

The short-term construction-related activities including the peak four months of project construction would not significantly affect goods movement on the local circulation system serving the study area. The local study roadway segments would continue to operate at LOS C or better even during the peak project construction months. The surrounding roadway circulation system, including I-15 and I-10, are anticipated to accommodate the delivery of goods and equipment to the proposed project site. As shown in Tables 7.10-9 and 7.10-10, Year 2009 Project Construction activities will not significantly impact the aforementioned project study roadway segments.

Safety

The roadways in the vicinity of the proposed project site have adequate sight distance. The roadways' vertical profile, primarily Etiwanda Avenue and 6th Street, are generally flat with no sharp curves that would affect driver perception and reaction time. In addition, the project site is located in an industrial area, with very few neighboring commercial/retail businesses or residences that might be affected by traffic incidents. The short-term increase in construction traffic is not expected to significantly increase the risk of traffic accidents in the area.

Air, Rail, and Waterborne Traffic

The proposed project would have no adverse impacts on air, rail, or waterborne traffic.

Air Traffic: The nearest airport facility is Ontario International Airport, located approximately 3.5 miles southwest of the proposed project site. Two minor airports in the region include Cable Airport (9 miles to the northwest) and Rialto Municipal (7 miles to the northeast).

The proposed project would have no effect on air traffic patterns. The operation of the proposed project is not dependent upon air transport-related materials, manpower, and services and would therefore not

result in increases of air traffic levels. Project design features such as stacks would not obstruct air traffic patterns because the previous uses and the existing EGS (including the Southern California Edison [SCE] switchyard and transmission towers currently operating and in-place within the project vicinity) have historically posed no constraints to normal airport operations. Based on these existing physical features, it can be concluded that the proposed SGGS would also not create any new constraints to existing and future air traffic patterns.

Rail Traffic: During the proposed project construction, a 15-acre site located approximately 1,300 feet due west of the SGGS site is proposed to be used as an offsite laydown and parking area. This site is bounded on the north by the BNSF Railroad main east-west line, on the east by a BNSF spur track, on the south by a dirt road, and on the west by a dirt road. Three grade crossings are proposed to be placed across the southerly BNSF spur track. Traffic and safety concerns associated with the proposed crossing would be alleviated through dialogue and coordination with the City of Rancho Cucamonga, BNSF, business and industry owners using the southerly spur, and the Applicant's contractors. The timing and frequency of the train movements are key elements to be considered for safe vehicular movements across the rail lines.

In order to ensure worker safety without compromising railroad activities, SGGS has engaged in conversations with BNSF to discuss what measures may be incorporated to support a safe railroad crossing. Since the rail line is a dead end spur serving very few trains (1 per day) traveling at a very low speed (approximately 5 mph) BNSF requested signals and permanent crossing arms. The Applicant will continue to work with BNSF and will provide periodic updates to the California Energy Commission (CEC) when the actual crossing measures are approved by BNSF.

Waterborne Traffic: The project study does not have significant waterborne features.

California Speedway

The proposed project would have no adverse impacts on the regionally significant California Speedway operations because the speedway is located farther east of Etiwanda Avenue and is directly served by a freeway interchange at I-10 and Cherry Avenue and a dedicated Metrolink Platform and tram service during major racing events. Due to the efficient dispersal of event traffic through of signage and traffic control during events, there is very little congestion from event traffic to and from the speedway.

The combination of multimodal access options available to the public (Transportation Demand Management measures) and the timing of the speedway events (i.e., late morning off-peak entry and late evening off-peak exit) would contribute to the reduction of speedway traffic during the a.m. and p.m. peak hours.

7.10.2.3 Operations Impacts

The project is projected to begin operations in 2010. At this time, plant operations will require approximately 18 full-time permanent personnel (see Table 2.7-1 in Chapter 2), with 11 employees during the day shift. For analysis purposes, it was conservatively estimated that up to 6 delivery/service vehicle trips, including the estimated once per week delivery of aqueous ammonia, would occur during project operations. Based on the minimal operational added trips, the SGGS plant operations would not substantially change the LOS of the roads and intersections in the study area. Therefore, no significant traffic impacts during project operations are anticipated.

Freeway/Roadway Level of Service During Project Operations (2010)

Table 7.10-15 presents the peak hour directional freeway/roadway segment LOS under Year 2010 No Project conditions.

Table 7.10-15
Freeway/Roadway Segment Level of Service
Year 2010 No Project Conditions

Freeway/ Roadway	Segment	Cross-Section (Lanage)	A.M. Peak Hour Volume[1]	P.M. Peak Hour Volume[1]	A.M. Peak Hour (LOS)	P.M. Peak Hour (LOS)
Interstate 10	East of Etiwanda[2]	8-Lane Mixed Flow	5,351/8,027	8,831/5,887	B/F	F/C
Interstate 10	West of Etiwanda[2]	8-Lane Mixed Flow	5,757/8,636	9,500/6,334	C/F	F/C
Interstate 15	North of I-10[2]	8-Lane Mixed Flow	5,572/8,360	9,196/6,131	B/F	F/C
Interstate 15	South of I-10[2]	8-Lane Mixed Flow	5,905/8,857	9,744/6,496	C/F	F/D
Etiwanda Avenue	North of Napa	4-Lane Undivided	647/747	992/742	A/A	A/A
Etiwanda Avenue	South of 6th	4-Lane Undivided	652/776	983/957	A/A	A/A
6th Street	West of Etiwanda	2-Lane Undivided	70/59	161/67	A/A	A/A

[1] Northbound/southbound, eastbound/westbound peak hour directional traffic volume
[2] Source: Caltrans, 2005

As shown in Table 7.10-15, all local study roadway segments are forecast to operate at LOS A under Year 2010 No Project conditions.

The four study freeway segments are forecast to operate at LOS E or F on some directions during the a.m. and p.m. peak hours. These findings are consistent with the current traffic patterns within the study area:

- Interstate 10 (East of Etiwanda) – LOS F a.m. (westbound), LOS F p.m. (eastbound)
- Interstate 10 (West of Etiwanda) – LOS F a.m. (westbound), LOS F p.m. (eastbound)
- Interstate 15 (North of I-10) – LOS F a.m. (southbound), LOS F p.m. (northbound)
- Interstate 10 (South of I-10) – LOS F a.m. (southbound), LOS F p.m. (northbound)

Table 7.10-16 presents the peak hour directional freeway/roadway segment LOS under Year 2010 Project Operations conditions. Figure 7.10-10 shows Year 2010 Project Operations roadway segment traffic volume.

As shown in Table 7.10-16, the LOS at traffic study area freeway/roadway segments under Year 2010 Project Operations would remain unchanged from Year 2010 No Project conditions, due to the minimal added trips associated with Year 2010 Project Operations.

Based on these findings, no significant traffic impacts would occur at traffic study area freeway/roadway segments during project operations.

Table 7.10-16
Freeway/Roadway Segment Level of Service
Year 2010 Project Operations Conditions

Freeway/ Roadway	Segment	Cross-Section (Lanage)	A.M. Peak Hour Volume[1]	P.M. Peak Hour Volume[1]	A.M. Peak Hour (LOS)	P.M. Peak Hour (LOS)
Interstate 10	East of Etiwanda[2]	8-Lane Mixed Flow	5,351/8,033	8,837/5,887	B/F	F/C
Interstate 10	West of Etiwanda[2]	8-Lane Mixed Flow	5,771/8,645	9,509/6,348	C/F	F/C
Interstate 15	North of I-10[2]	8-Lane Mixed Flow	5,572/8,360	9,196/6,131	B/F	F/C
Interstate 15	South of I-10[2]	8-Lane Mixed Flow	5,910/8,862	9,749/6,501	C/F	F/D
Etiwanda Avenue	North of Napa	4-Lane Undivided	647/747	992/742	A/A	A/A
Etiwanda Avenue	South of 6th	4-Lane Undivided	672/785	992/977	A/A	A/A
6th Street	West of Etiwanda	2-Lane Undivided	70/59	161/67	A/A	A/A

[1] Northbound/southbound, eastbound/westbound peak hour directional traffic volume
[2] Source: Caltrans, 2005

Intersection Level of Service During Project Operations (2010)

Table 7.10-17 presents peak-hour intersection LOS and average vehicle delay under Year 2010 No Project conditions. The LOS calculation worksheets are provided in Appendix Q-5. Figure 7.10-11 shows Year 2010 No Project conditions a.m. and p.m. peak-hour turning movement volumes for each traffic study area intersection.

As shown in Table 7.10-17, all traffic study area intersections would operate at LOS C or better under Year 2010 No Project conditions

Table 7.10-18 presents peak-hour intersection LOS and average vehicle delay results under Year 2010 Project Operations conditions. The LOS calculation worksheets are provided in Appendix Q-6. Figure 7.10-12 shows Year 2010 Project Operations a.m. and p.m. peak-hour turning movement volumes for each study area intersection.

As shown in Table 7.10-18, traffic study area intersection LOS under Year 2010 Project Operations conditions would remain unchanged from Year 2010 No Project conditions. Due to the minimal added trips associated with Year 2010 Project Operations, there is a minimal increase in intersection delay. This delay would not cause a change in LOS at any of the study intersections.

Based on these findings, no significant traffic impacts would occur at traffic study area intersections during project operations.

Table 7.10-17
Peak-Hour Intersection LOS – Year 2010 No Project Conditions

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	Average Delay (sec)	LOS	Average Delay (sec)	LOS
1. Etiwanda Avenue/Napa Street	11.6	B	11.4	B
2. Etiwanda Avenue/6th Street	12.9	B	13.2	B
3. Etiwanda Avenue/Wells	12.5	B	14.4	B
4. Etiwanda Avenue/4th Street/San Bernardino Avenue	28.0	C	30.5	C
5. Etiwanda Avenue/Valley Boulevard	14.5	B	13.0	B
6. Etiwanda Avenue/Ontario Mills Parkway	9.9	A	12.7	B
7. Etiwanda Avenue/I-10 Westbound Ramps	20.5	C	10.6	B
8. Etiwanda Avenue/I-10 Eastbound Ramps	21.6	C	13.7	B

Notes: LOS = level of service, sec = second(s); Westbound = westbound

Table 7.10-18
Peak-Hour Intersection LOS – Year 2010 Project Operations

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	Average Delay (sec)	LOS	Average Delay (sec)	LOS
1. Etiwanda Avenue/Napa Street	13.9	B	11.8	B
2. Etiwanda Avenue/6th Street	13.0	B	13.5	B
3. Etiwanda Avenue/Wells	12.6	B	14.7	B
4. Etiwanda Avenue/4th Street/San Bernardino Avenue	27.8	C	30.5	C
5. Etiwanda Avenue/Valley Boulevard	14.3	B	12.9	B
6. Etiwanda Avenue/Ontario Mills Parkway	9.9	A	12.8	B
7. Etiwanda Avenue/I-10 Westbound Ramps	20.4	C	10.5	B
8. Etiwanda Avenue/I-10 Eastbound Ramps	21.5	C	13.7	B

Notes: LOS = level of service, sec = second(s)

Peak-Hour Signal Warrant

Tables 7.10-19 and 7.10-20 summarize the Year 2010 No Project and Year 2010 Project Operations peak-hour signal warrant on three 2-way stop controlled intersections in the traffic study area. The detailed peak-hour signal warrant worksheets are included in Appendices Q-10 and Q-11.

Table 7.10-19 Peak-Hour Signal Warrant – Year 2010 No Project				
	A.M. Peak Hour		P.M. Peak Hour	
	Warrant Met?		Warrant Met?	
Intersection	Yes	No	Yes	No
2. Etiwanda Avenue/6th Street		X		X
3. Etiwanda Avenue/Wells		X		X
6. Etiwanda Avenue/Ontario Mills Parkway		X		X

Table 7.10-20 Peak-Hour Signal Warrant – Year 2010 Project Operations				
	A.M. Peak Hour		P.M. Peak Hour	
	Warrant Met?		Warrant Met?	
Intersection	Yes	No	Yes	No
2. Etiwanda Avenue/6th Street		X		X
3. Etiwanda Avenue/Wells		X		X
6. Etiwanda Avenue/Ontario Mills Parkway		X		X

Based on Year 2010 No Project and Year 2010 Project Operations peak-hour volume projections, none of the intersections would meet peak-hour signal warrants.

7.10.2.4 Hazardous Materials Transport

Construction of the proposed project would generate hazardous wastes consisting primarily of waste oil and oil filters, paint, solvents, and spent welding materials. Operation of the proposed project would result in the generation of additional wastes, including waste crankcase oil, oily rags and absorbent, spent catalyst, and HSRG cleaning wastewater.

Tanker trucks with a capacity of up to about 8,000 gallons will deliver aqueous ammonia to the facility from a supplier somewhere in Southern California. Such deliveries will be made approximately once per week (this number of trips is included in the calculation of delivery/service truck trips in Section 7.10.2.3).

A licensed hazardous waste transporter would move those materials that require offsite removal to a hazardous waste landfill that is able to accommodate hazardous wastes of the appropriate class.

The SGGS operations would develop hazardous materials transport and disposal procedures similar to those at the existing EGS operations. Section 7.12, Hazardous Materials Handling, provides more detailed discussion of the hazardous materials transport, handling, and disposal.

7.10.3 Cumulative Impacts

Past and current development in the project vicinity has resulted in a cumulatively significant increase in traffic in the project vicinity, particularly on freeways during peak periods. Relevant future projects identified in Section 7.4.3 could further contribute to cumulative traffic impacts. In particular, the proposed major distribution warehouse complex within the City of Fontana and the automobile recycling business located north of the proposed project could result in increased truck traffic exiting/entering the I-10 freeway at Etiwanda Avenue, which may add to the cumulative impacts at the on and off ramps. The Caltrans improvements along I-10 and I-15 could alleviate some of these cumulative impacts, but no information regarding specific implementation efforts is currently available with the exception of the published and circulated study.

During operation, the proposed project will generate minimal additional traffic, based on the employment and delivery information provided in Section 7.10.2.3 above. Therefore, the proposed project's contribution to this impact would not be cumulatively considerable. The proposed project's cumulative impact would therefore be less than significant.

An examination of cumulative construction traffic was conducted. SCE is proposing construction of the Rio Vista Substation, located directly south of the proposed project site. The proposed construction activities are anticipated to last eleven months beginning in August 2008 and ending in June 2009. Since the SCE project peak construction activities occurs in December 2008, and the substation is expected to be operational by June 2009, there is no anticipated overlap in peak construction activities since the SGGS peak construction would not occur until August 2009. The planned SCE LM6000 peaker is expected to be completed and operational in 2007.

The re-equipping of the automotive recycling facility to the north of the EGS is expected to be completed by approximately September 2008, well before proposed project construction traffic would be apparent. Information regarding the Caltrans freeway improvements is not available.

The warehouse projects described in Section 7.4.3 would be located in an area where construction traffic on Etiwanda Avenue would be unlikely, although they could contribute short-term construction traffic to the freeways. Further east of the project site (approximately 27 miles east), the reconstruction of the I-10/Live Oak Canyon Interchange is anticipated to start by summer of 2007. Based on the distance between the SGGS project and the I-10/Live Oak Canyon Interchange, there no nexus of cumulative traffic impact effects between these two projects.

Based on available information, the proposed project's construction traffic would not coincide with known potential future projects, so its contribution to cumulative traffic impacts during construction would not be cumulatively considerable, and cumulative impacts of the proposed project would therefore be less than significant.

Further east of the project site (approximately 27 miles east), the reconstruction of the I-10/Live Oak Canyon Interchange is anticipated to start by summer of 2007. Based on the distance between the SGGS project and the I-10/Live Oak Canyon Interchange, there no nexus of cumulative traffic impact effects between these two projects.

7.10.4 Mitigation Measures

During project construction no study roadway segments and intersections would be significantly impacted by the proposed project.

The following proposed mitigations or project design features are offered either as part of the construction activity requirements, or as pro-active measures initiated by the Project proponent to minimize

construction-related tripmaking and resultant increases of traffic to the surrounding roadway circulation system.

The project proponent will develop and implement a standard traffic control plan consistent with the size and scope of the project construction activity designed to minimize impact to traffic flow.

Proposed measures include but are not limited to the following:

TRA-1 Traffic Control Measures. Use proper signs and traffic control measures in accordance with Caltrans, County and City requirements. All traffic signs, equipments and control measures shall conform to the provisions specified in the Caltrans Traffic Manual (Red Book) and the Manual of Uniform Traffic Control Device. Specific jurisdictional requirements will be identified during the plan review and approval process.

TRA-2 Lane Closures. Schedule traffic lane or road closures during off-peak hours whenever possible (e.g., during construction of offsite gas pipeline across Etiwanda Avenue).

TRA-3 Limit Construction Traffic. Limit vehicular traffic to designated access roads, construction laydown and worker parking areas, and Project construction site. Encourage worker carpooling to minimize drive-alone worker trips.

7.10.5 Laws, Ordinances, Regulations, and Standards

Table 7.10-21 summarizes applicable traffic and transportation LORS for the proposed project. The proposed project site lies within the territory of Caltrans, District 8, which has jurisdiction over I-10 and I-15. The City of Rancho Cucamonga has jurisdiction over the local roadways. The segment of Etiwanda Avenue south of 4th Street is within the jurisdiction of City of Ontario.

Table 7.10-21
Applicable Traffic Laws, Ordinances, Regulations, and Standards

LORS	Applicability	Administering Agency	AFC Section
Title 49, Code of Federal Regulations, Section 171-177	Governs the transportation of hazardous materials, including the marking of transportation vehicles.	California Highway Patrol	Section 7.10.5.1, Federal Authorities and Administering Agencies
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.	Federal Aviation Administration	Section 7.10.5.1, Federal Authorities and Administering Agencies
California Vehicle Code, Section 353	Defines the hazardous materials.	California Highway Patrol	Section 7.10.5.2, State Authorities and Administering Agencies

Table 7.10-21
Applicable Traffic Laws, Ordinances, Regulations, and Standards (Continued)

LORS	Applicability	Administering Agency	AFC Section
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.	California Department of Motor Vehicles	Section 7.10.5.2, State Authorities and Administering Agencies
California Vehicle Code, Section 31303-31309	Requires transporters of hazardous materials to use the shortest route possible.	California Highway Patrol	Section 7.10.5.2, State Authorities and Administering Agencies
California Vehicle Code, Section 32000-32053	Regulates the licensing of carriers of hazardous materials and noticing requirements.	California Highway Patrol	Section 7.10.5.2, State Authorities and Administering Agencies
California Vehicle Code, Section 32100-32109	Transporters of inhalation hazardous materials or explosive materials must obtain a hazardous materials transportation license.	California Highway Patrol	Section 7.10.5.2, State Authorities and Administering Agencies
California Vehicle Code, Section 34000-34100	Establish special requirements for the flammable and combustible liquids over public roads and highways.	California Highway Patrol	Section 7.10.5.2, State Authorities and Administering Agencies
California Vehicle Code, Section 34500	Regulate the safe operation of vehicles, including those that are used for the transportation of hazardous materials.	California Highway Patrol	Section 7.10.5.2, State Authorities and Administering Agencies
California Vehicle Code, Section 35550	Imposes weight guidelines and restrictions upon vehicles traveling upon freeways and highways.	California Department of Transportation	Section 7.10.5.2, State Authorities and Administering Agencies
California Vehicle Code, Section 35780	Requires approval for a permit to transport oversized or excessive load over state highways.	California Department of Transportation	Section 7.10.5.2, State Authorities and Administering Agencies

Table 7.10-21
Applicable Traffic Laws, Ordinances, Regulations, and Standards (Continued)

LORS	Applicability	Administering Agency	AFC Section
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.	California Department of Transportation	Section 7.10.5.2, State Authorities and Administering Agencies
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.	California Department of Transportation and City of Rancho Cucamonga	Section 7.10.5.2, State Authorities and Administering Agencies
California Health and Safety Code, Section 25160 et seq.	Addresses the safe transport of the hazardous materials.	California Highway Patrol	Section 7.10.5.2, State Authorities and Administering Agencies
California Department of Transportation Traffic Manual, Section 5-1.1	Requires traffic control plans to ensure continuity of traffic during roadway construction.	City of Rancho Cucamonga	Section 7.10.5.2, State Authorities and Administering Agencies
City of Rancho Cucamonga General Plan, Circulation Element	Requires LOS D or better operating conditions for City intersections and roadways	City of Rancho Cucamonga	Section 7.10.5.3, Local Authorities and Administering Agencies
City of Ontario Traffic Impact Criteria	Requires LOS D (V/C <1.0) or better operating conditions for City intersections and roadways	City of Ontario	Section 7.10.5.3, Local Authorities and Administering Agencies

Notes:
FAA = Federal Aviation Administration
LORS = laws, ordinances, regulations, and standards
ROW = right-of-way

The Circulation Element of the City of Rancho Cucamonga General Plan provides the policies and goals and objectives that addresses the circulation, parking, pedestrian, bicycle, and goods movement within the City. The San Bernardino County CMP Traffic Impact Analysis Guidelines was used in the evaluation of intersection and roadway operational performance. The *Caltrans Standard Plans and Caltrans Traffic Manual* provides guidelines for traffic control and lane closures for construction work that should be followed.

To comply with the hazardous materials regulations, the Applicant must follow the guidelines set forth in Section 7.10.2.4, Hazardous Materials Transport, which include rules from the Federal Motor Carrier Safety Administration.

Standards for the transport of hazardous materials are contained in the Code of Federal Regulations (CFR), Title 49 and enforced by the U.S. Department of Transportation. Additionally, the State of California has promulgated rules for hazardous waste transport that can be found in the California Code of Regulations, Title 26. Hauling would be carried out in accordance with state and federal regulations that include the Resource Conservation and Recovery Act (42 U.S. Code 6901 et seq.) and the California Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.). Additional regulations for the transportation of hazardous materials are outlined in the California Vehicle Code (Sections 2500-505, 12804-804.5, 31300, 3400, and 34500-501). The two state agencies with primary responsibility for enforcing federal and state regulations governing the transportation of hazardous wastes are the California Highway Patrol and Caltrans. In addition, the federal government prescribes regulations for transporting hazardous materials. These regulations are described in the CFR, Number 49, Part 171. These laws and ordinances place requirements on various aspects of hazardous waste hauling, from materials handling to vehicle signs, to ensure public safety. Transporting/handling of chemicals and wastes are discussed in the Hazardous Materials Management section, including the transport of ammonia (for a more detailed description of hazardous waste regulations, see Table 7.13-5).

7.10.5.1 Federal Authorities and Administering Agencies

Title 49, Code of Federal Regulations, Parts 171-177. Governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

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

The SGGS 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 the Federal Aviation Administration (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.

7.10.5.2 State Authorities and Administering Agencies

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 statute is the CHP.

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

California Vehicle Code, Sections 2500-2505. 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 SGGS would comply with these codes by requiring that contractors and employees be properly licensed and endorsed when operating vehicles used to transport hazardous materials.

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. Requires a commercial driver's license to operate commercial vehicles. Requires an endorsement issued by the Department of Motor Vehicles (DMV) to drive any commercial vehicle identified in Section 15278. The administering agency for the above statutes is the DMV.

The SGGS would comply with these codes by requiring that contractors and employees be 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 statutes is the CHP.

The SGGS 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 31600-31620. Regulates the transportation of explosive materials. The administering agency for the above statutes is the CHP. It must be noted that the proposed SGGS would not use explosive materials specifically defined in Section 12000 of the Health and Safety Code. However, the SGGS would comply with this law by requiring that shippers of other potentially explosive materials have the required licenses from the CHP.

California Vehicle Code, Sections 32000-32053. 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 proposed SGGS would comply with this law by requiring that motor carriers of hazardous materials be properly licensed by the CHP.

California Vehicle Code, Sections 32100-32109. 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 proposed SGGS would comply with this law by requiring shippers of these types of material to comply with all route restrictions, equipment standards, and inspection requirements.

California Vehicle Code, Sections 34000-34100. 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 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 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 Health and Safety Code. The administering agency for the above regulation is the CHP.

The proposed SGGS 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.

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 this regulation is the CHP.

The proposed SGGS would comply with this law by requiring shippers of hazardous materials to have the necessary permits, inspections, and licenses issued by the CHP for the safe operation of the 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. 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 this statute is the California Department of Transportation (Caltrans).

The proposed SGGS 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.

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 the Caltrans. The administering agency for this statute is Caltrans.

The proposed SGGS 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.

California Streets and Highways Code, Section 117. Unless otherwise specifically provided in the instrument conveying title, the acquisition by the department of any right-of-way 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 right-of-way 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 this statute is Caltrans.

If applicable, the proposed SGGS would comply with this code by acquiring the necessary permits and approval from Caltrans with regard to use of public rights-of-way.

The California Streets and Highways Code, Sections 660, 670, 672, 1450, 1460, 1470, 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 agencies for this regulation are Caltrans and City of Rancho Cucamonga Public Works Department.

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

California Health and Safety Code, Section 25160 et seq. 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 this regulation is the DTSC.

The proposed SGGS 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.

California Department of Transportation Traffic Manual, Section 5-1.1. 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 this regulation are Caltrans and City of Rancho Cucamonga Public Works Department.

The Applicant would file a Traffic Control Plan prior to the start of construction.

7.10.6 Involved Agencies and Agency Contacts

The proposed project lies in proximity to roadways under the operational jurisdiction of Caltrans, the City of Rancho Cucamonga, and the City of Ontario. The relevant agencies and appropriate contacts are shown below.

Issue	Agency/Address	Contact/Title	Telephone
Navigable Airspace	Federal Aviation Administration Western-Pacific Region P.O. Box 92007 Los Angeles, CA 90009	Karen McDonald	(310) 725-6557
State Highways/Hazardous Materials Transport	California Highway Patrol 2211 Western Ave. San Bernardino, CA 92411-1243	Officer Jorge Sanchez Inland Coordinator	(909) 806-2400
Regional Congestion Management Program Compliance	San Bernardino Association of Governments (SANBAG) 1170 W. 3rd Street San Bernardino, CA 92410-1715	Steve Smith, Principal Transportation Analyst	(909) 884-8276
County Circulation Plan Traffic Analysis Guideline Future Growth Projections	County of San Bernardino, Department of Public Works, Traffic Division 825 E. Third Street, Room 115 San Bernardino, CA 92415-0835	Jacob Babico, PE Division Chief Ed Petre, PE, Traffic Engineer	(909) 387-8186 (909) 387-8239
Local Roadway Improvements Local Circulation Plans and Policies Local Lane Closure and Loads Permits	City of Rancho Cucamonga, Department of Engineering Public Works, Transportation Development Section 10500 Civic Center Drive, Rancho Cucamonga, CA 91730	Jon Gillespie PE, City Traffic Engineer James Harris Associate Engineer Akbar Risvi Assistant Engineer	(909) 477-2740 ext. 4051 (909) 477-2740 ext. 4052 (909) 477-2740 ext. 4054
Local Roadway Analysis Local Circulation Plans and Policies	City of Ontario, 303 E. B Street, Ontario, CA 91764	Tom Danna PE, Traffic and Transportation Manager Mauricio Diaz, PE, Principal Engineer	(909) 395-2387 (909) 395-2107

Issue	Agency/Address	Contact/Title	Telephone
Hazardous Materials Transport	Federal Motor Carrier Safety Administration 980 – 9th Street, Suite 450 Sacramento, CA 95814	Glenn Beck, Operations Supervisor	(916) 498-5050
Freeway Segment Analysis	California Department of Transportation District 8 464 West 4th St., San Bernardino, CA 92401-1400	Greg Ramirez, PE, Senior Transportation Engineer	(909) 383-6309
Caltrans Transportation Permits	Southern Region Transportation Permits California Department of Transportation District 8 464 West 4th St., MS 618 San Bernardino, CA 92401	Moe Bhuyian, MS, PE Regional Manager	(909) 553-8402
I-10, I-15 Traffic Closures and Conditions	California Department of Transportation District 8 464 West 4th St., San Bernardino, CA 92401	Terri Kasinga, Public Information Officer	(909) 383-4631

7.10.7 Permits Required and Permit Schedule

Traffic studies for projects in San Bernardino County require consultation with the County's Department of Public Works to comply with their traffic analysis requirements. The short duration of the project construction, in conjunction with no permanent addition additional worker trips, would impose such an insignificant addition to existing traffic levels that these requirements are not entirely applicable to the proposed project. However, these issues require consultation with Department of Public Works staff.

The relevant permits required for traffic related construction or operational work activities performed within the City of Rancho Cucamonga are identified below.

Responsible Agency	Permit/Approval	Schedule
City of Rancho Cucamonga, Department of Public Works, Engineering Division	Encroachment Permit	TBD [1]
City of Rancho Cucamonga, Department of Public Works, Engineering Division	Lane Closure Permit	TBD [2]
City of Rancho Cucamonga, Department of Public Works, Engineering	Oversize Load Permit	TBD [3]
[1] To be determined – Consult with city staff [2] To be determined – Allow 24 Hours Minimum For Processing Minor Closures (Lasting 1 or 2 Days). Allow 7 to 10 Days For Processing Major Closures (Lasting 3 Days or More) [3] To be determined – Single, 30 days or annual permit		

7.10.8 References

Auto Club 500, 2007. *2007 FEB Metrolink Schedule (Jan 4th).pdf,* from http://www.californiaspeedway.com.

Caltrans (California, Department of Transportation, District 8), 2007. *Traffic Volumes on California State Highways*.

Caltrans (California, Department of Transportation), 2005. 2005 Traffic Volumes on the California State Highway System, available at http://www.dot.ca.gov/hq/traffops/saferesr/trafdata.

City of Rancho Cucamonga, 2001. *General Plan Circulation Element.*

Dowling Associates, 2000. Traffix 7.6 R1. http://www.dowlinginc.com/traffix.php.

National Research Council, Transportation Research Board, 2000. *Highway Capacity Manual 2000.*

San Bernardino County, 2003. *Congestion Management Plan.* Update.

San Bernardino County, 2006. Department of Public Works, Traffic Division, Transportation Planning Research Section, Traffic Volume Expansion Factors, Yard Number 1, Master Station 11.

Source:
2004 DeLorme, Topo USA 5.0
www.delorme.com

0 5 10
Scale in Miles
1:250,000

N

REGIONAL VICINITY

San Gabriel Generating Station
San Gabriel Power Generation, LLC
Rancho Cucamonga, California

April 2007
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FIGURE 7.10-1A

4/10/07 vsa ..\Reliant Etiwanda\Graphics\7.10 Traffic\7.10-1A_reg vicinity_topoUSA.cdr

Source:
USGS Topographic map, 7.5 minute series:
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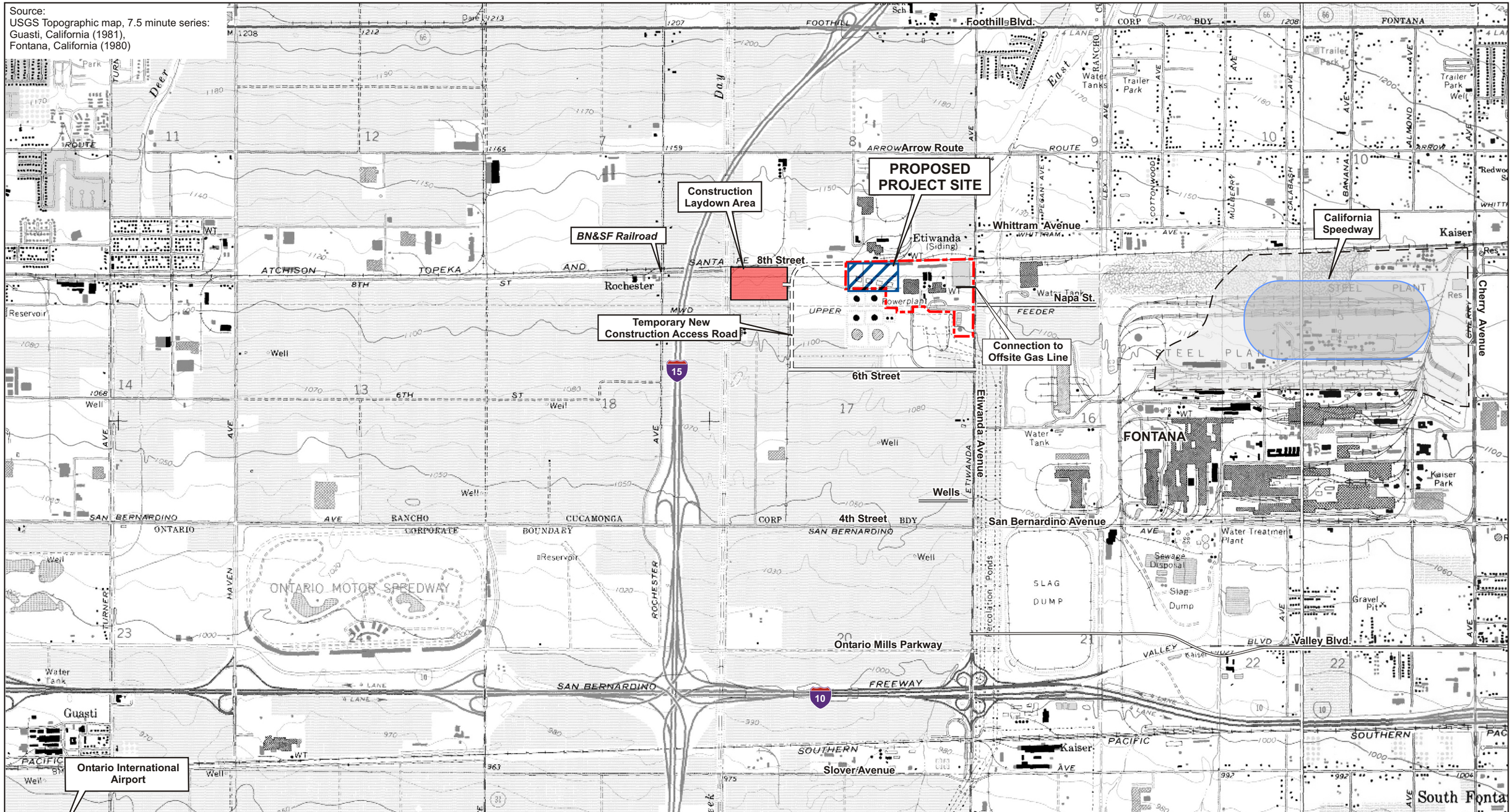
Fontana, California (1980)



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Scale in Miles

0 2000 4000
Scale in Feet
1:24,000

N

LEGEND

- Proposed Project Site
- EGS Property Boundary

PROJECT LOCATION MAP

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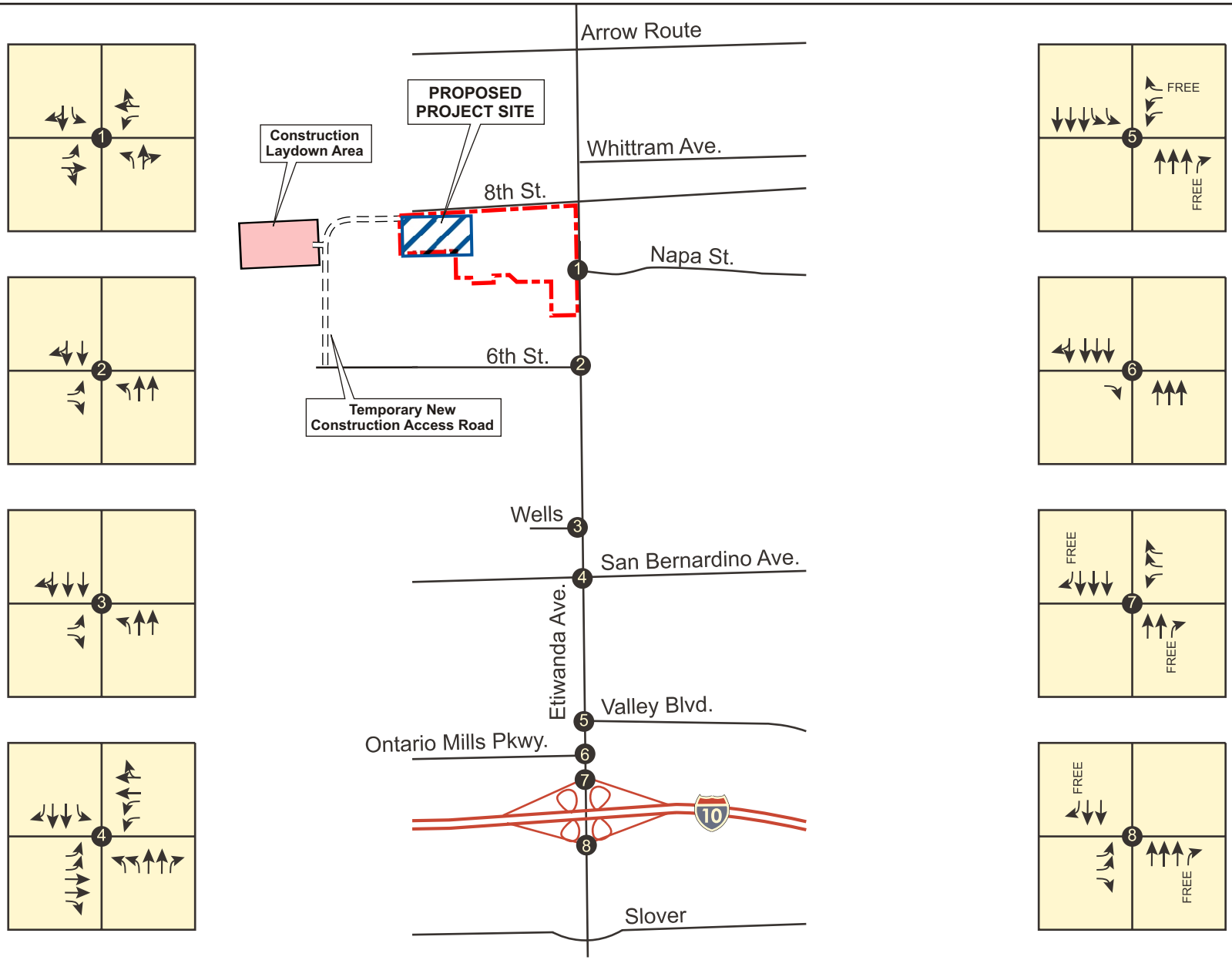
FIGURE 7.10-1B

4/10/07 vsa ..\Reliant Etiwanda\Graphics\7.10 Traffic\7.10-1B_proj loc.cdr



EXISTING INTERSECTION GEOMETRICS

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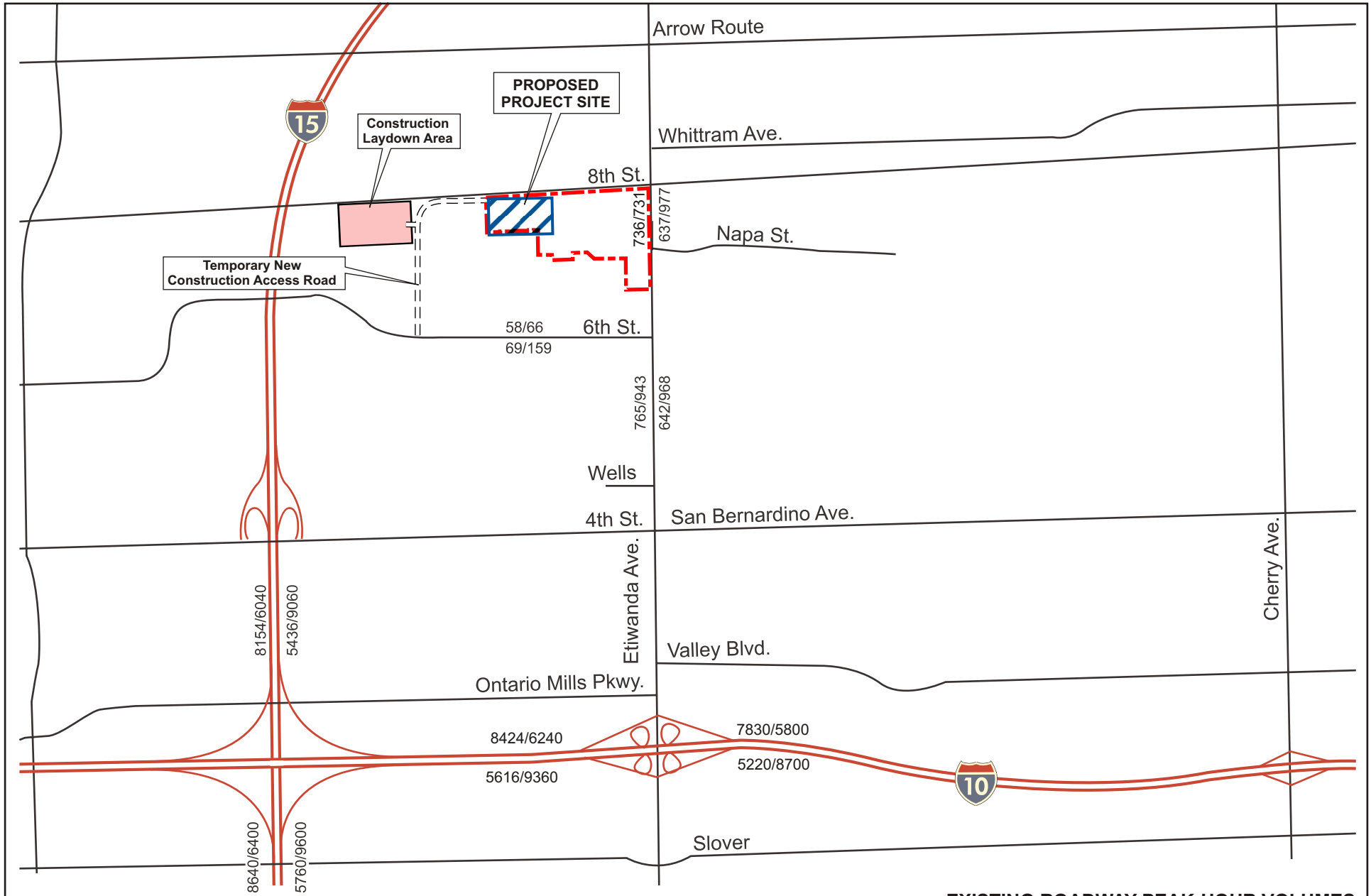
FIGURE 7.10-2

4/3/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-2_int.cdr



EXISTING ROADWAY PEAK-HOUR VOLUMES

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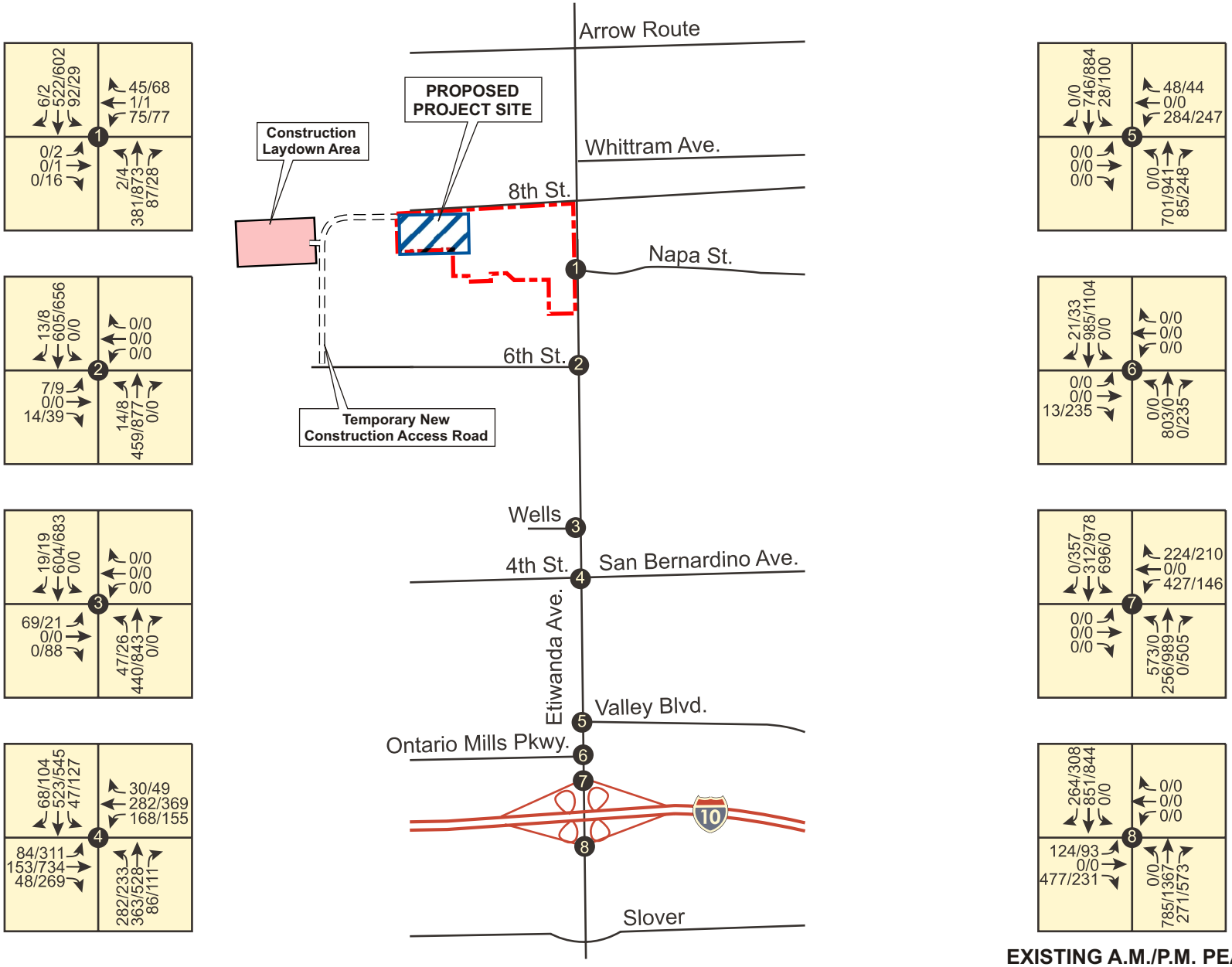
FIGURE 7.10-3

4/3/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-3_exist_peak.cdr



EXISTING A.M./P.M. PEAK-HOUR TURNING MOVEMENT VOLUMES

San Gabriel Generating Station
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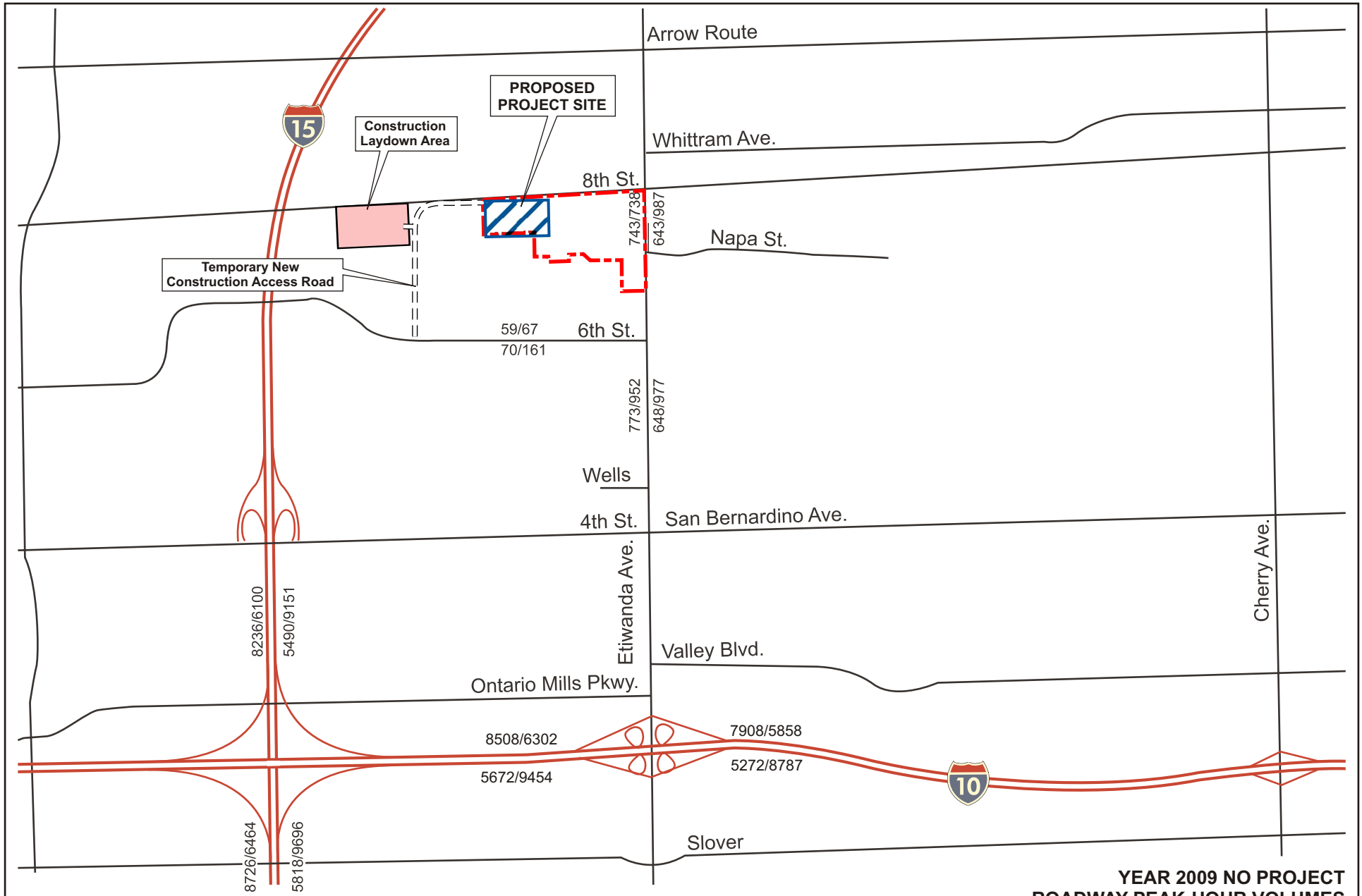
FIGURE 7.10-4

4/10/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-4_ampm_turning.cdr



YEAR 2009 NO PROJECT
ROADWAY PEAK-HOUR VOLUMES

San Gabriel Generating Station
San Gabriel Power Generation, LLC
Rancho Cucamonga, California

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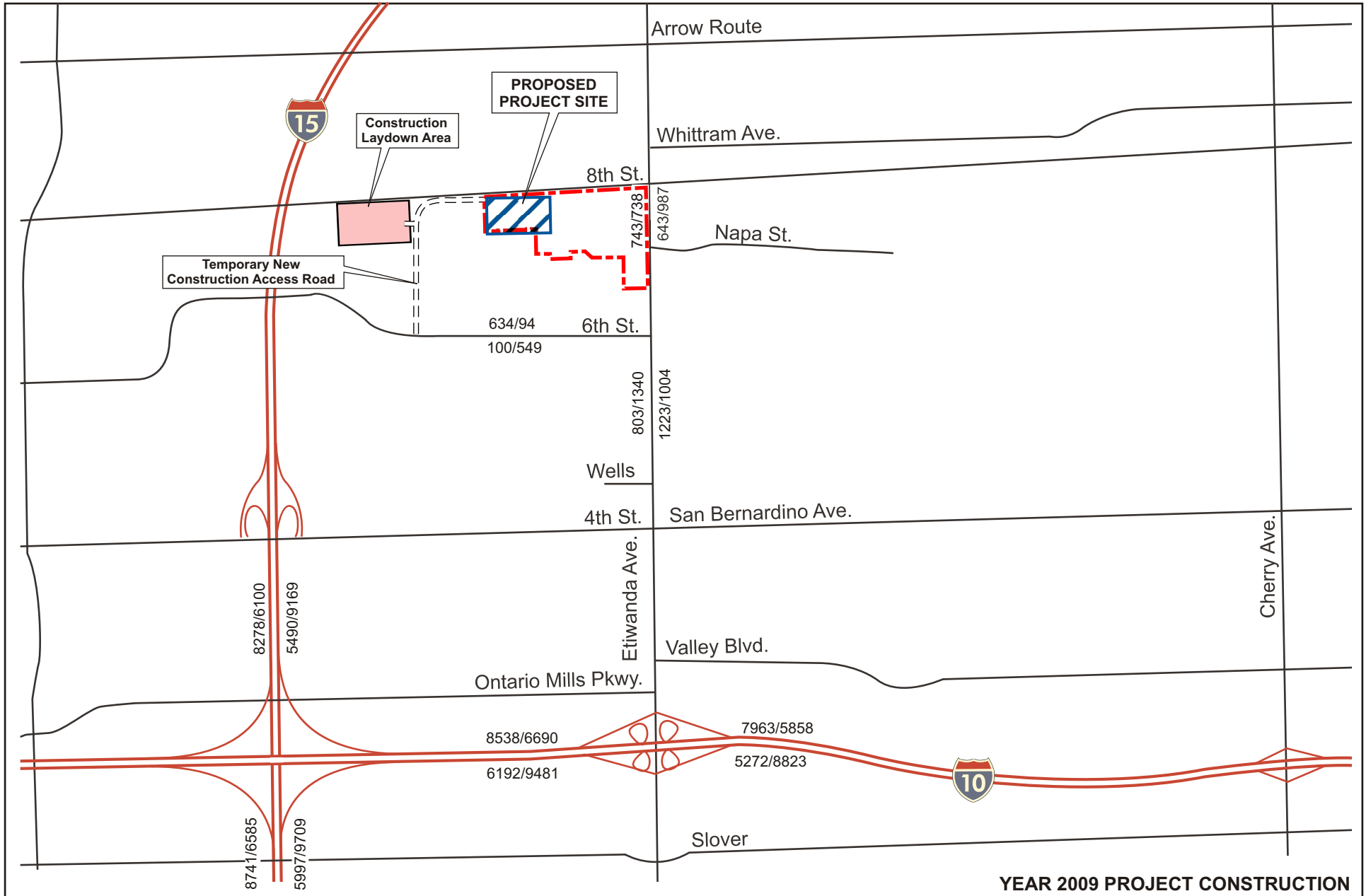
FIGURE 7.10-5

4/3/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-5_2009_noproj.cdr



YEAR 2009 PROJECT CONSTRUCTION ROADWAY PEAK-HOUR VOLUMES

San Gabriel Generating Station
San Gabriel Power Generation, LLC
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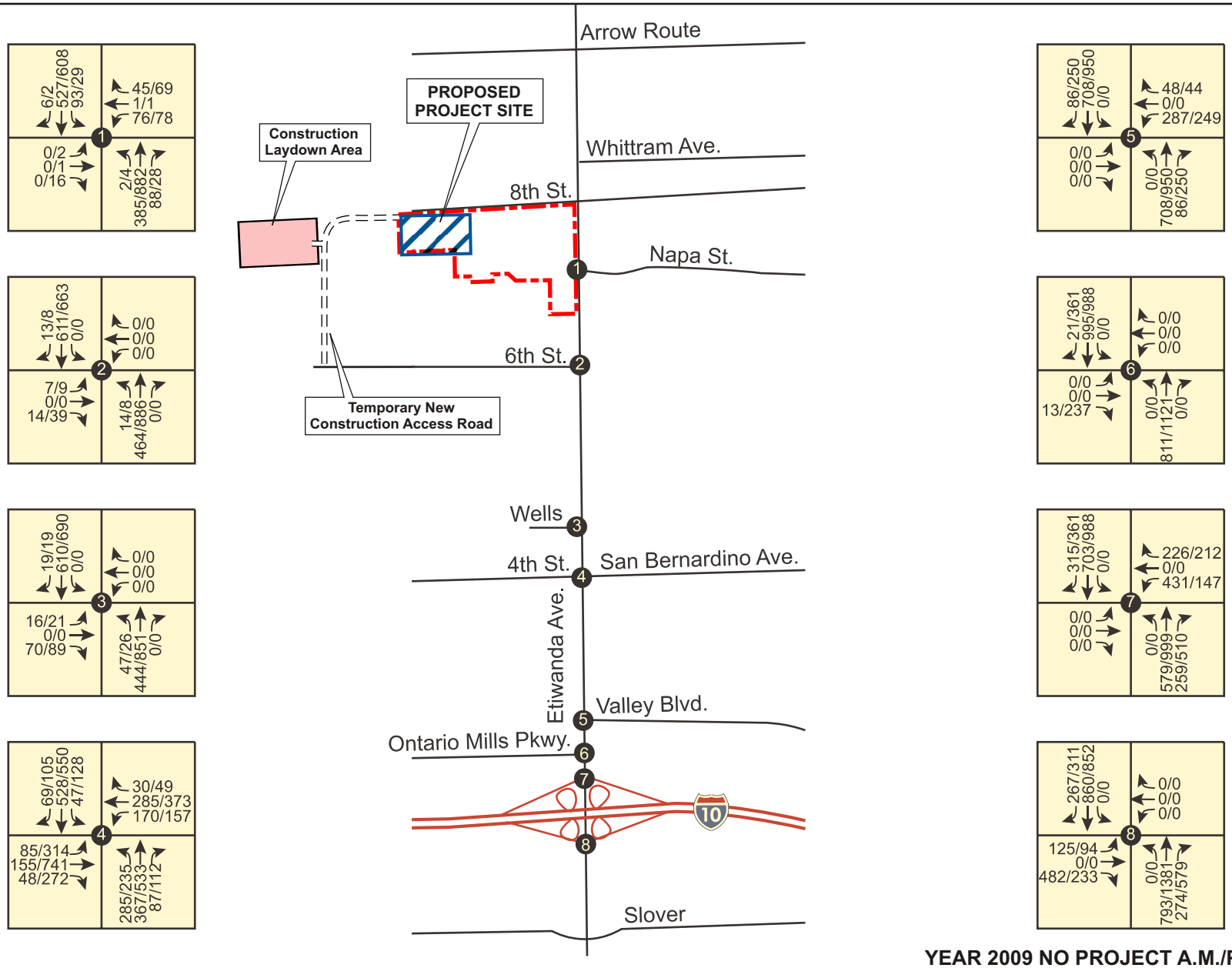
FIGURE 7.10-6

4/3/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-6_2009_const.cdr



YEAR 2009 NO PROJECT A.M./P.M. PEAK-HOUR TURNING MOVEMENT VOLUMES

San Gabriel Generating Station
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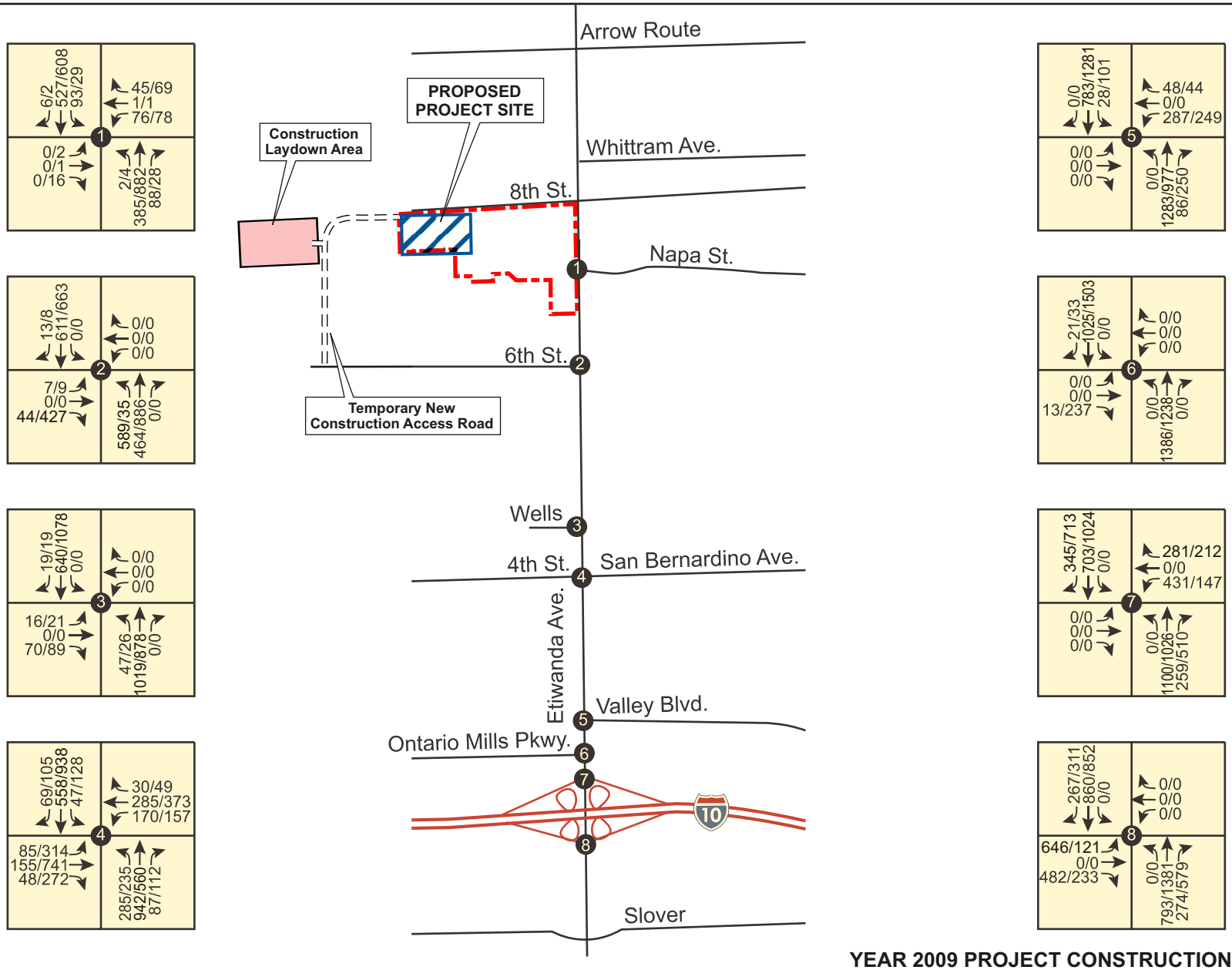
FIGURE 7.10-7

4/3/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-7_2009_noproj.cdr



YEAR 2009 PROJECT CONSTRUCTION A.M./P.M. PEAK-HOUR TURNING MOVEMENT VOLUMES

San Gabriel Generating Station
San Gabriel Power Generation, LLC
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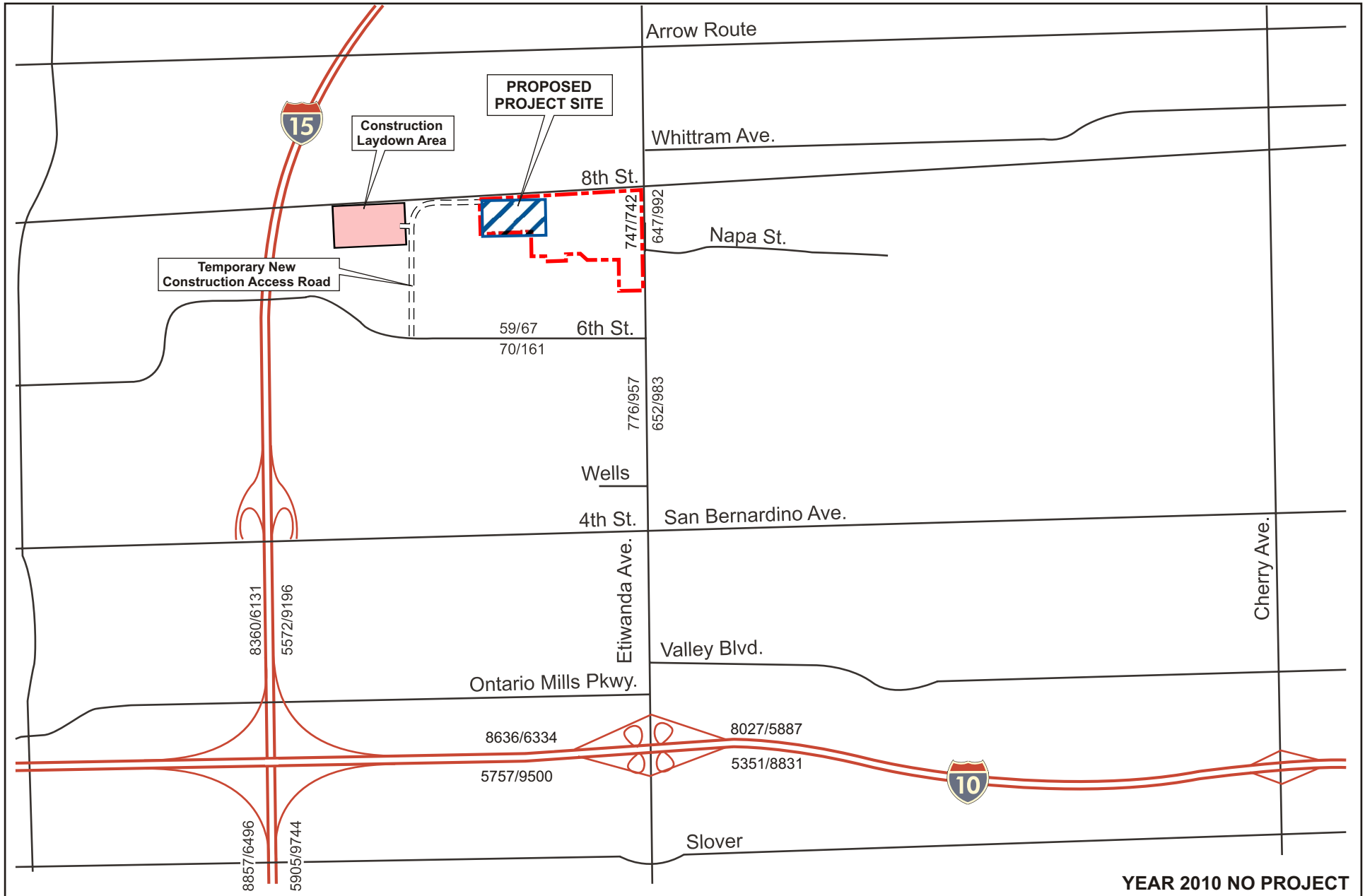
FIGURE 7.10-8

4/3/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-8_2009_proj_const.cdr



YEAR 2010 NO PROJECT
ROADWAY PEAK-HOUR VOLUMES

San Gabriel Generating Station
San Gabriel Power Generation, LLC
Rancho Cucamonga, California

April 2007
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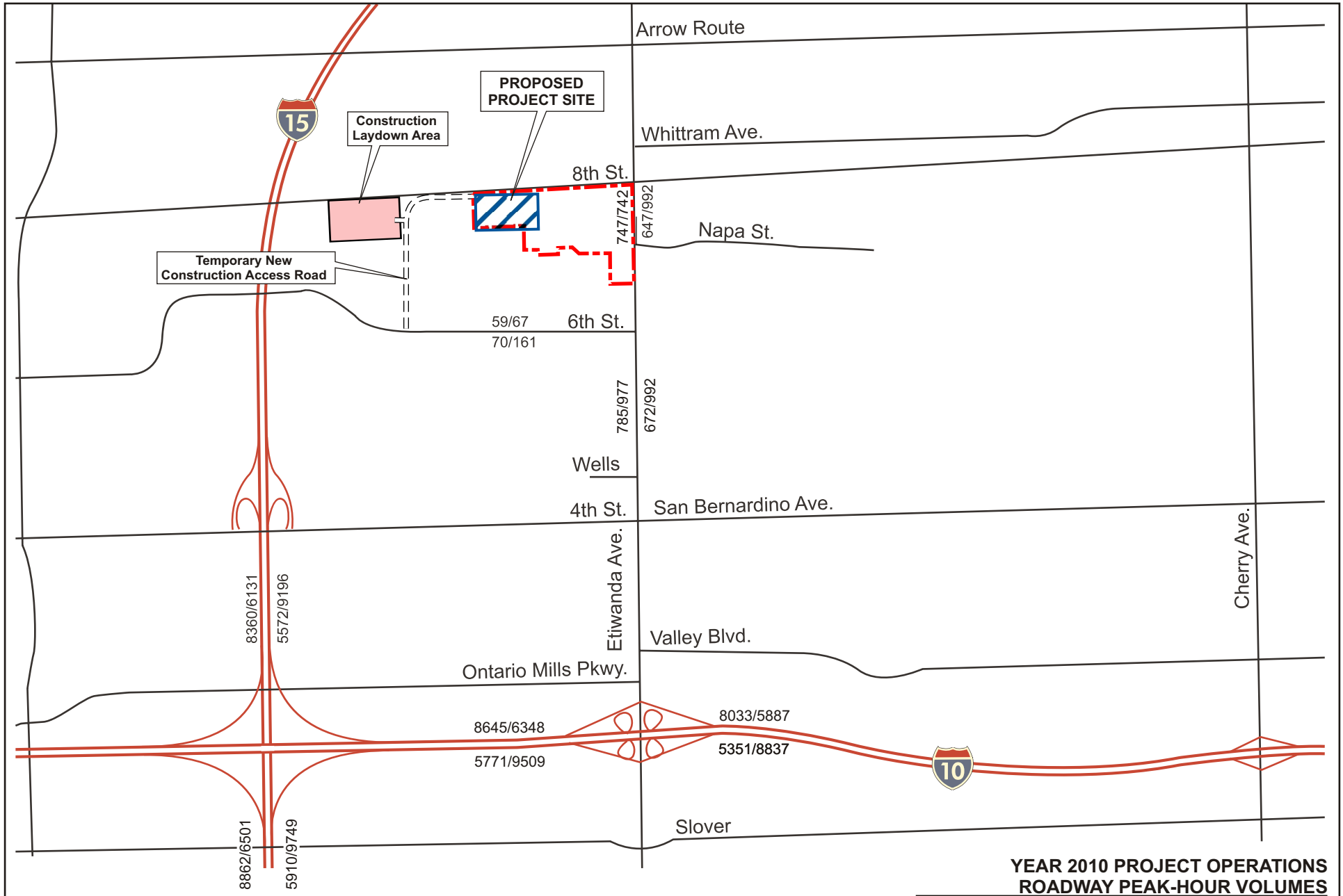
FIGURE 7.10-9

4/3/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-9_2010_noproj_peak.cdr



YEAR 2010 PROJECT OPERATIONS
ROADWAY PEAK-HOUR VOLUMES

San Gabriel Generating Station
San Gabriel Power Generation, LLC
Rancho Cucamonga, California

April 2007
28067169

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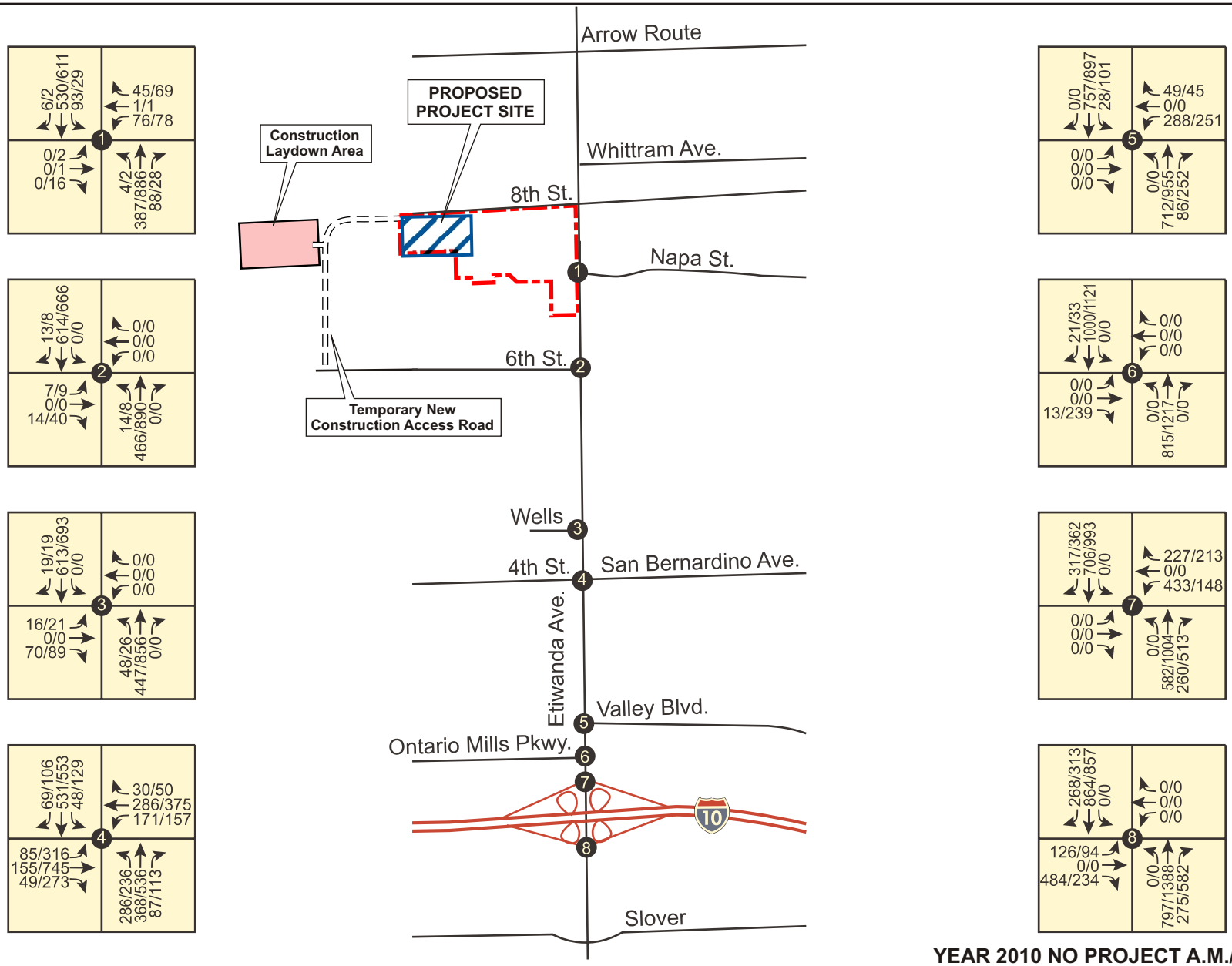
FIGURE 7.10-10

4/3/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-10_2010_proj_op.cdr



YEAR 2010 NO PROJECT A.M./P.M. PEAK-HOUR TURNING MOVEMENT VOLUMES

San Gabriel Generating Station
San Gabriel Power Generation, LLC
Rancho Cucamonga, California

April 2007
28067169

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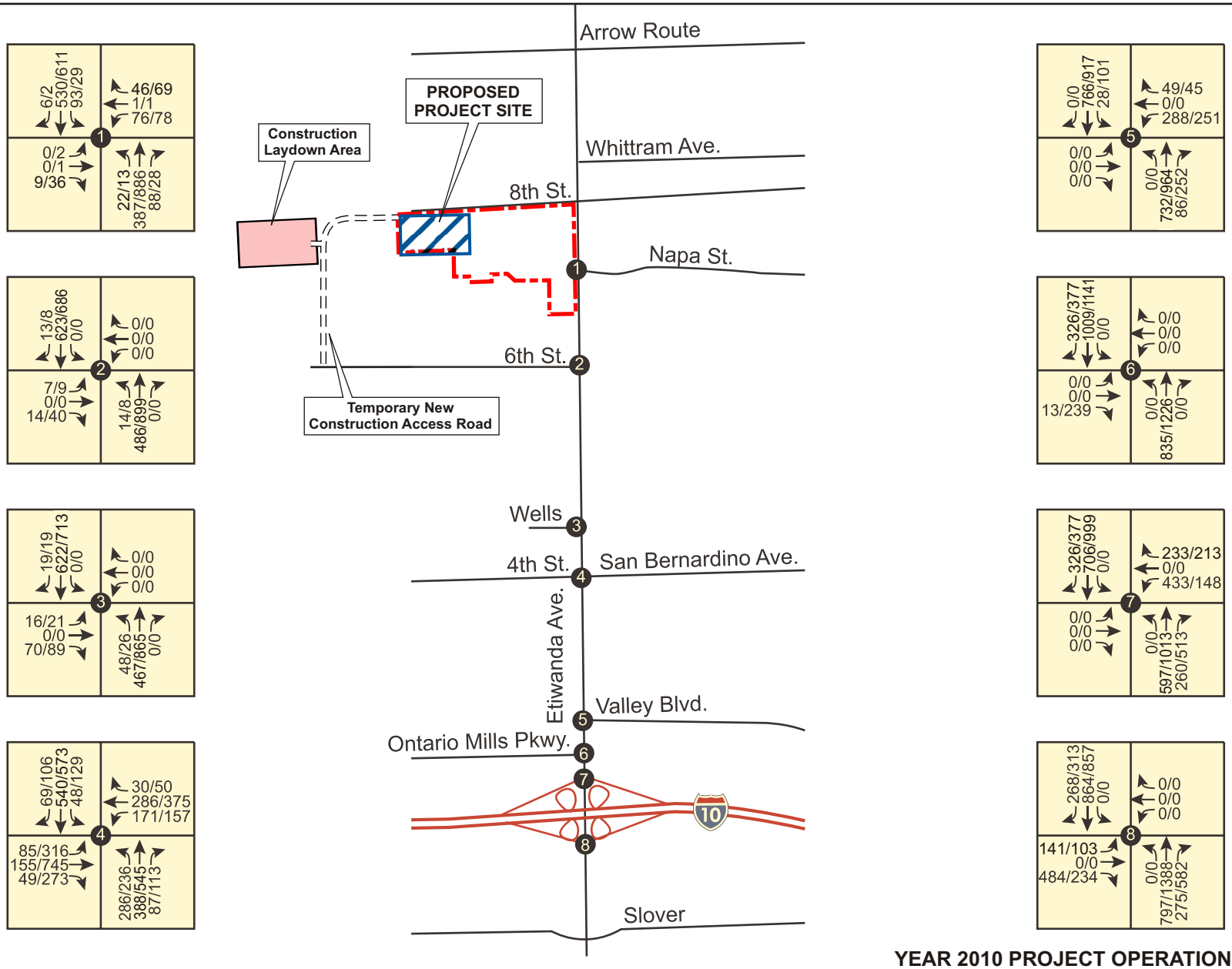
FIGURE 7.10-11

4/10/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-11_2010_noproj_ampm.cdr



YEAR 2010 PROJECT OPERATIONS A.M./P.M.
PEAK-HOUR TURNING MOVEMENT VOLUMES

San Gabriel Generating Station
San Gabriel Power Generation, LLC
Rancho Cucamonga, California

April 2007
28067169

URS

FIGURE 7.10-12

4/3/07 vsa/hk ..\Reliant Etiwanda\Graphics\7.10 Traffic\F7.10-12_2010_proj_op.cdr