

TRAFFIC IMPACT ANALYSIS

For

WATERMARK

Prepared for

THE CITY OF SAN DIEGO

and

SUDBERRY PROPERTIES

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1.0 EXECUTIVE SUMMARY

This study was commissioned by Sudberry Properties in order to determine potential transportation impacts and appropriate mitigation measures for the proposed Watermark Project. The proposed project is located on the Southeast corner of the Scripps Poway Parkway/I-15 Interchange. The development is proposed to be accessed via a channelized right in/out driveway on Scripps Poway Parkway just East of the I-15 Northbound Ramps as well as an existing signalized entry on Scripps Highland Drive at the existing intersection of Scripps Highland Drive/ Scripps Gateway Court. The proposed development involves a Community Plan Amendment and Rezone (as well as other discretionary actions) to include a mix of uses such as Multi-Tenant Office, a Regional Shopping Center, a Movie Theater and a Hotel which would be expected to generate approximately 21,509 daily driveway trips and 18,552 daily cumulative trips (not including the Med-Impact buildings). The ultimate land use intensity for each type of use (i.e. office/retail/etc...) has not yet been determined and will be dependent on market conditions. However, the trip generation for the project will not exceed what has been evaluated in this study (including daily trips, AM peak inbound, AM peak outbound, PM peak inbound and PM peak outbound) and therefore any impacts from a project generating less traffic would be less than what was considered in this analysis. The project site is adjacent to and shares access with the existing (Bldg. 1) and entitled (Bldg. 2) Med-Impact Single-Tenant Office buildings. This development has been considered an “other project” for offsite analysis (Bldg. 1 was under construction but not yet open at the time of existing traffic counts) and has been considered part of the “whole site” for access analysis purposes. The proposed development would be expected to generate a maximum 21,509 ADT at driveways with 648 trips in the AM peak hour (501 inbound and 148 outbound) and 2,003 trips in the PM peak hour (978 inbound and 1,025 outbound). The proposed development would be expected to generate a maximum 18,552

cumulative ADT with 583 trips in the AM peak hour (455 inbound and 127 outbound) and 1,726 trips in the PM peak hour (838 inbound and 888 outbound).

In order to determine a scope of work for the Transportation Impact Study, staff of Urban Systems Associates, Inc. (USAI) completed a preliminary analysis and met with City Transportation staff. Based on the meeting, study area intersections and street segments were identified for the analysis and traffic generation and distribution was determined. The preliminary analysis was based on a Sandag Series 11 travel forecast and both machine and manual traffic counts of the existing daily and peak hour traffic flow data for the study intersections and street segments.

The traffic generation of the Watermark project was based on trip generation rates found in the City of San Diego's May 2003 Trip Generation Manual. The project traffic was added to the Existing, Near Term and Horizon Year 2030 scenarios resulting in an impact analysis which analyzed six scenarios: Existing, Existing with Project, Near Term Without Project, Near Term With Project, Horizon Year 2030 Without Project, and Horizon Year 2030 With Project. The term Near Term is meant to discuss a condition occurring within the next several years to reflect the proposed project's opening day. This reflects the best information available for determining what traffic would be in the next several years. The analysis year used for transportation modeling purposes is the Year 2030. SANDAG Series 11 select zone analysis was used to determine the distribution of project traffic and future with project traffic volumes.

Study Results:

Based upon this transportation impact analysis, it was determined that development of the proposed project would have the following impacts:

Impacts:

1. **Street Segments** – The proposed project has five (5) significant direct project roadway segment impacts and one (1) arterial segment significant impact in the Existing With Project scenario as shown in **Table 1-1**. The proposed project has five (5) significant direct project roadway segment impacts and one (1) arterial segment significant impact in the Near Term With Project scenario as shown in **Table 1-2** and shown below. Street segment impacts occur on the same segments in both Existing With Project and Near Term With Project scenarios.

<u>Road</u>	<u>Segment</u>
Scripps Poway Pkwy.	I-15 NB / Scripps Highland Dr.
Scripps Poway Pkwy.	Scripps Highland Dr. / Scripps Summit Dr.
Scripps Poway Pkwy.	Scripps Summit Dr./ Spring Canyon Rd.
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Drive
Scripps Poway Pkwy.	Scripps Creek Dr. / Cypress Canyon Road
Scripps Poway Pkwy.	Cypress Canyon Road/ Angelique Street

For significant cumulative street segment impacts, see **Table 1-3**. The analysis shows six (6) roadway segments and one (1) arterial segment that have a significant cumulative project impact as shown below:

<u>Road</u>	<u>Segment</u>
Scripps Poway Pkwy.	I-15 NB / Scripps Highland Dr.
Scripps Poway Pkwy.	Scripps Highland Dr. / Scripps Summit Dr.
Scripps Poway Pkwy.	Scripps Summit Dr./ Spring Canyon Rd.
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Drive
Scripps Poway Pkwy.	Scripps Creek Dr. / Cypress Canyon Road
Scripps Poway Pkwy.	Cypress Canyon Road/ Angelique Street
Scripps Poway Pkwy.	Angelique Street / Pomerado Road

TABLE 1-1

Existing With & Without Project Street Segment Significance

Road	Segment	Jurisd.	# lanes	Class.	Existing			Existing + Project			ΔV/C	Is this impact Significant?
					LOS	Volume	V/C	LOS	Volume	V/C		
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	D	30,688	0.77	D	31,616	0.79	0.023	NO
	Westview Pkwy./ Mercy Rd.	SD	6	PA	B	30,216	0.50	B	31,515	0.53	0.022	NO
	Capricorn Way/ Westview Pkwy.	SD	6	PA	B	25,599	0.43	B	26,712	0.45	0.019	NO
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	B	15,830	0.40	B	18,056	0.45	0.056	NO
	Kika Ct./ Alemania Rd.	SD	4	4-M	B	17,719	0.44	B	20,131	0.50	0.060	NO
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	C	21,056	0.53	C	23,839	0.60	0.070	NO
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	E	57,613	0.96	F	70,733	1.18	0.219	YES
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	C	49,688	0.83	E	57,431	0.96	0.129	YES
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	C	41,832	0.70	C	47,212	0.79	0.090	NO
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	E	38,992	0.97	F	41,960	1.05	0.074	YES
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	E	35,805	0.90	E	38,217	0.96	0.060	YES
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	D	34,720	0.87	E	36,761	0.92	0.051	YES
	Angelique St./ Pomerado Rd.	Poway	6	PA	C	36,008	0.60	C	37,678	0.63	0.028	NO
	Pomerado Rd./ Kirkham Rd.	Poway	6	PA	C	41,405	0.69	C	42,518	0.71	0.019	NO

Legend:

LOS= Level of Service

SD= San Diego

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

PA = 6 lane Prime Arterial

4-M = 4 Lane Major Arterial

Existing With & Without Project Arterial Analysis Significance

Road	Segment	# of Lanes	Jurisd.	Class.	Direction	Existing				Existing + Project				ΔSpeed (mph) AM	ΔSpeed (mph) PM	Is this impact Significant?
						AM		PM		AM		PM				
						Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	6	SD	PA	Eastbound	15.8	E	17.3	E	14.5	E	9.2	F	1.3	8.1	YES
					Westbound	22.8	C	22.2	C	22.7	C	10.6	F	0.1	11.6	YES
	Scripps Highland Dr./ Scripps Summit Dr.	6	SD	PA	Eastbound	30.4	B	21.4	D	30	B	13.7	E	0.4	7.7	YES
					Westbound	31.6	B	27.2	C	30.6	B	25.0	C	1.0	2.2	NO
	Scripps Summit Dr./ Spring Canyon Rd.	6	SD	PA	Eastbound	18.9	D	17.0	D	13.7	E	12.7	F	5.2	4.3	YES
					Westbound	15.2	E	17.4	D	12.8	F	15.0	E	2.4	2.4	YES
	Spring Canyon Rd./ Scripps Creek Dr.	4	SD	4-M	Eastbound	20.1	D	21.6	D	20	D	19.8	D	0.1	1.8	NO
					Westbound	25.3	C	28.0	B	23.8	C	24.6	C	1.5	3.4	NO
	Scripps Creek Dr./ Cypress Canyon Rd.	4	SD	4-M	Eastbound	24.3	C	24.0	C	24.2	C	23.1	C	0.1	0.9	NO
					Westbound	23.7	C	24.8	C	23.3	C	23.7	C	0.4	1.1	NO
	Cypress Canyon Rd./ Vail Ct.	4	SD	4-M	Eastbound	28.6	B	27.4	C	28.6	B	27.2	C	0.0	0.2	NO
					Westbound	31.8	B	31.3	B	31.7	B	30.8	B	0.1	0.5	NO
	Angelique St./ Pomerado Rd.	6	Poway	PA	Eastbound	28.4	B	26.4	C	28.4	B	26.2	C	0.0	0.2	NO
					Westbound	26.2	C	22.5	C	26	C	20.1	D	0.2	2.4	NO
	Pomerado Rd./ Kirkham Rd.	6	Poway	PA	Eastbound	43.6	A	37.7	A	43	A	37.3	A	0.6	0.4	NO
					Westbound	36.9	A	34.7	B	36.6	A	34.4	B	0.3	0.3	NO

Legend:

LOS= Level of Service

SD= San Diego

PA = 6 lane Prime Arterial

4-M = 4 Lane Major Arterial

TABLE 1-2

Near Term With & Without Project Street Segment Significance

Road	Segment	Jurisd.	# lanes	Class.	Near Term			Near Term + Project			ΔV/C	Is this impact Significant?
					LOS	Volume	V/C	LOS	Volume	V/C		
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	D	31,737	0.79	D	32,665	0.82	0.023	NO
	Westview Pkwy./ Mercy Rd.	SD	6	PA	B	31,884	0.53	B	33,183	0.55	0.022	NO
	Capricorn Way/ Westview Pkwy.	SD	6	PA	B	25,793	0.43	B	26,906	0.45	0.019	NO
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	B	16,662	0.42	B	18,888	0.47	0.056	NO
	Kika Ct./ Alemania Rd.	SD	4	4-M	B	18,472	0.46	B	20,884	0.52	0.060	NO
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	C	21,764	0.54	C	24,547	0.61	0.070	NO
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	E	59,591	0.99	F	72,711	1.21	0.219	YES
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	D	50,855	0.85	E	58,598	0.98	0.129	YES
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	C	42,772	0.71	C	48,152	0.80	0.090	NO
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	E	39,511	0.99	F	42,479	1.06	0.074	YES
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	E	36,226	0.91	E	38,638	0.97	0.060	YES
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	E	35,077	0.88	E	37,118	0.93	0.051	YES
	Angelique St./ Pomerado Rd.	Poway	6	PA	C	36,300	0.61	C	37,970	0.63	0.028	NO
	Pomerado Rd./ Kirkham Rd.	Poway	6	PA	C	41,599	0.69	C	42,712	0.71	0.019	NO

Legend:

LOS= Level of Service

SD= San Diego

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

PA = 6 lane Prime Arterial

4-M = 4 Lane Major Arterial

Near Term With & Without Project Arterial Analysis Significance

Road	Segment	# of Lanes	Jurisd.	Class.	Direction	Near Term				Near Term + Project				ΔSpeed (mph) AM	ΔSpeed (mph) PM	Is this impact Significant?
						AM		PM		AM		PM				
						Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS			
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	6	SD	PA	Eastbound	15.8	E	15.6	E	16.3	E	5.1	F	-0.5	10.5	YES
						22.8	C	16.8	E	22.4	C	13.4	E	0.4	3.4	YES
	Scripps Highland Dr./ Scripps Summit Dr.	6	SD	PA	Eastbound	30.2	B	20.3	D	29.7	B	9.3	F	0.5	11.0	YES
						31.6	B	27.4	C	32.9	B	22.7	C	-1.3	4.7	NO
	Scripps Summit Dr./ Spring Canyon Rd.	6	SD	PA	Eastbound	18.8	D	14.5	E	18	D	16.2	E	0.8	-1.7	NO
						13.6	E	18.0	D	10	F	11.1	F	3.6	6.9	YES
	Spring Canyon Rd./ Scripps Creek Dr.	4	SD	4-M	Eastbound	20.1	D	21.0	D	19.9	D	26.0	C	0.2	-5.0	NO
						24.4	C	26.6	C	23.1	C	26.7	C	1.3	-0.1	NO
	Scripps Creek Dr./ Cypress Canyon Rd.	4	SD	4-M	Eastbound	24.3	C	23.7	C	24.2	C	21.7	D	0.1	2.0	NO
						23.3	C	24.8	C	22.9	C	23.3	C	0.4	1.5	NO
	Cypress Canyon Rd./ Vail Ct.	4	SD	4-M	Eastbound	28.4	B	27.3	C	28.6	B	27.0	C	-0.2	0.3	NO
						31.7	B	31.3	B	31.5	B	30.3	B	0.2	1.0	NO
	Angelique St./ Pomerado Rd.	6	Poway	PA	Eastbound	28.4	B	25.1	C	28.4	B	24.7	C	0.0	0.4	NO
						25.8	C	22.2	C	25.6	C	19.4	D	0.2	2.8	NO
	Pomerado Rd./ Kirkham Rd.	6	Poway	PA	Eastbound	43.2	A	37.7	A	42.4	A	37.1	A	0.8	0.6	NO
						36.4	A	33.3	B	36.3	A	33.1	B	0.1	0.2	NO

Legend:

LOS= Level of Service

SD= San Diego

PA = 6 lane Prime Arterial

4-M = 4 Lane Major Arterial

**TABLE 1-3
Horizon Year 2030 & Year 2030 + Project Street Segment Significance**

Road	Segment	Jurisd.	# lanes	Class.	Year 2030			Year 2030 + Project			ΔV/C	Is this impact Significant?
					LOS	Volume	V/C	LOS	Volume	V/C		
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	D	33,972	0.85	D	34,900	0.87	0.023	NO
	Westview Pkwy./ Mercy Rd.	SD	6	PA	B	34,401	0.57	C	35,700	0.60	0.022	NO
	Capricorn Way/ Westview Pkwy.	SD	6	PA	C	39,587	0.66	C	40,700	0.68	0.019	NO
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	B	18,174	0.45	B	20,400	0.51	0.056	NO
	Kika Ct./ Alemania Rd.	SD	4	4-M	C	21,888	0.55	C	24,300	0.61	0.060	NO
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	C	24,017	0.60	C	26,800	0.67	0.070	NO
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	E	59,880	1.00	F	73,000	1.22	0.219	YES
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	D	52,157	0.87	E	59,900	1.00	0.129	YES
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	C	46,220	0.77	D	51,600	0.86	0.090	NO
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	F	40,032	1.00	F	43,000	1.08	0.074	YES
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	E	38,488	0.96	F	40,900	1.02	0.060	YES
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	E	37,159	0.93	E	39,200	0.98	0.051	YES
	Angelique St./ Pomerado Rd.	Poway	6	PA	E	56,630	0.94	E	58,300	0.97	0.028	YES
Pomerado Rd./ Kirkham Rd.	Poway	6	PA	D	52,387	0.87	D	53,500	0.89	0.019	NO	

Legend:

LOS= Level of Service

SD= San Diego

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

PA = 6 lane Prime Arterial

4-M = 4 Lane Major Arterial

Horizon Year 2030 & Horizon Year 2030 With Project Arterial Analysis Significance

Road	Segment	# of Lanes	Jurisd.	Class.	Direction	Year 2030				Year 2030 + Project				ΔSpeed (mph) AM	ΔSpeed (mph) PM	Is this impact Significant?
						AM		PM		AM		PM				
						Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS			
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	6	SD	PA	Eastbound	14.9	E	13.8	E	10.4	F	10.4	F	4.5	3.4	YES
					Westbound	22.2	C	20.2	D	17.7	D	17.7	D	4.5	2.5	NO
	Scripps Highland Dr./ Scripps Summit Dr.	6	SD	PA	Eastbound	29.7	B	13.4	E	9	F	10.1	F	20.7	3.3	YES
					Westbound	31.1	B	24.7	C	21.4	D	21.4	D	9.7	3.3	NO
	Scripps Summit Dr./ Spring Canyon Rd.	6	SD	PA	Eastbound	14.4	E	15.6	E	15.9	E	8.7	F	-1.5	6.9	YES
					Westbound	12.0	F	16.7	E	12.5	F	13.6	E	-0.5	3.1	YES
	Spring Canyon Rd./ Scripps Creek Dr.	4	SD	4-M	Eastbound	20.1	D	21.1	D	22.5	C	22.5	C	-2.4	-1.4	NO
					Westbound	23.6	C	26.8	C	26.3	C	25.5	C	-2.7	1.3	NO
	Scripps Creek Dr./ Cypress Canyon Rd.	4	SD	4-M	Eastbound	23.8	C	23.0	C	21.0	D	21.0	D	2.8	2.0	NO
					Westbound	23.2	C	24.7	C	22.5	C	22.5	C	0.7	2.2	NO
	Cypress Canyon Rd./ Vail Ct.	4	SD	4-M	Eastbound	24.4	C	22.2	C	22.9	C	22.9	C	1.5	-0.7	NO
					Westbound	31.4	B	30.9	B	29.9	B	29.9	B	1.5	1.0	NO
	Angelique St./ Pomerado Rd.	6	Poway	PA	Eastbound	24.5	C	24.1	C	23.2	C	23.2	C	1.3	0.9	NO
					Westbound	25.0	C	20.4	D	18.6	D	18.6	D	6.4	1.8	NO
Pomerado Rd./ Kirkham Rd.	6	Poway	PA	Eastbound	39.5	A	32.5	B	31.2	B	31.2	B	8.3	1.3	NO	
				Westbound	35.2	A	31.8	B	31.5	B	31.5	B	3.7	0.3	NO	

Legend:

LOS= Level of Service

SD= San Diego

PA = 6 lane Prime Arterial

4-M = 4 Lane Major Arterial

2. **Intersections** - The proposed project has no Existing With Project direct significant project impacts as shown on **Table 1-4**. The proposed project has two (2) Near Term With Project direct significant project impacts as shown in **Table 1-5**. For cumulative intersection impacts, see **Table 1-6**. The analysis shows two (2) intersections (Mercy Road/I-15 SB Ramps & Scripps Poway Parkway / Scripps Highlands Drive) that has a direct and cumulative significant project impact.
3. **Ramp Meter Analysis**- As shown in **Tables 1-7** thru **1-9**, no significant ramp meter impacts are expected as a result of the project.
4. **Freeway Segment Analysis**- As shown in **Tables 1-10** thru **1-12**, no significant freeway segment impacts are expected as a result of the project.

Mitigation:

Based on consultation with Caltrans as well as City Staff, a reconfiguration of the Scripps Poway Parkway/I-15 Interchange is proposed as shown on the attached exhibit. This reconfiguration would shift the Westbound through lanes on Scripps Poway Parkway to the north and provide additional queuing length for Westbound traffic on Scripps Poway Parkway to the Interchange. The existing “back-to-back” left turn lanes are proposed to be eliminated and additional queuing for westbound traffic turning left from Scripps Poway Parkway to Southbound I-15 will be provided. This reconfiguration is expected to not only provide additional queuing but improve signal operation in the Interchange area through better coordination of signals and smoother traffic flow. Narrowing of the median to increase road width on Scripps Poway Parkway east of the Interchange will be required to improve traffic flow and queuing. Please refer to **Figure 1-1** for details.

TABLE 1-4
Existing Without & Existing With Project
Intersection Comparison

#	Intersection	Existing				Existing With Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Park Village Rd. / Black Mountain Rd.	39.0	D	42.9	D	51.4	D	12.4	No	44.0	D	1.1	No
2	Mercy Rd. / Black Mountain Rd.	31.6	C	32.5	C	33.6	C	2.0	No	34.6	C	2.1	No
3	Westview Pkwy / Black Mountain Rd.	16.7	B	17.5	B	16.8	B	0.1	No	17.8	B	0.3	No
4	Capricorn Way / Black Mountain Rd.	41.0	D	39.5	D	42.2	D	1.2	No	39.5	D	0.0	No
5	Kika Ct. / Mercy Rd.	6.0	A	6.2	A	6.0	A	0.0	No	6.4	A	0.2	No
6	Mercy Rd. / Alemania Rd.	15.6	B	10.7	B	15.6	B	0.0	No	12.9	B	2.2	No
7	Mercy Rd. / I-15 SB ramps	34.2	C	32.6	C	34.4	C	0.2	No	53.1	D	20.5	No
8	Scripps Poway Pkwy / I-15 NB ramps	10.1	B	22.7	C	10.2	B	0.1	No	27.2	C	4.5	No
9	Scripps Poway Pkwy / Scripps Highlands Dr.	19.8	B	21.0	C	24.1	C	4.3	No	54.8	D	33.8	No
10	Scripps Highland Dr. / Scripps Gateway *	14.3	B	7.2	A	6.9	A	-7.4	No	17.0	B	9.8	No
11	Scripps Poway Pkwy / Scripps Summit Dr.	27.4	C	32.1	C	32.3	C	4.9	No	48.2	D	16.1	No
12	Scripps Poway Pkwy / Spring Canyon Rd.	26.5	C	29.9	C	35.0	C	8.5	No	47.9	D	18.0	No
13	Scripps Poway Pkwy / Scripps Creek Dr.	26.8	C	23.1	C	27.2	C	0.4	No	28.3	C	5.2	No
14	Scripps Poway Pkwy / Cypress Canyon Rd.	11.8	B	12.6	B	12.1	B	0.3	No	14.0	B	1.4	No
15	Scripps Poway Pkwy / Springbrook Dr.	22.0	C	32.2	C	22.3	C	0.3	No	40.7	D	8.5	No
16	Scripps Poway Pkwy / Pomerado Rd.	29.4	C	35.7	D	29.4	C	0.0	No	37.1	D	1.4	No
17	Scripps Poway Pkwy / Kirkham Rd.	12.4	B	24.5	C	13.8	B	1.4	No	25.3	C	0.8	No

Notes:

* = Outbound lane configuration improved per Watermark Site Plan.

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

TABLE 1-5
Near Term Without & Near Term With Project
Intersection Comparison

#	Intersection	Near Term				Near Term With Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Park Village Rd. / Black Mountain Rd.	50.7	D	44.5	D	51.6	D	0.9	No	46.0	D	1.5	No
2	Mercy Rd. / Black Mountain Rd.	33.4	C	33.5	C	34.0	C	0.6	No	35.6	D	2.1	No
3	Westview Pkwy / Black Mountain Rd.	16.7	B	20.7	C	16.7	B	0.0	No	21.3	C	0.6	No
4	Capricorn Way / Black Mountain Rd.	41.0	D	40.0	D	42.1	D	1.1	No	41.0	D	1.0	No
5	Kika Ct. / Mercy Rd.	6.0	A	6.3	A	6.1	A	0.1	No	6.5	A	0.2	No
6	Mercy Rd. / Alemania Rd.	15.6	B	11.2	B	15.7	B	0.1	No	11.9	B	0.7	No
7	Mercy Rd. / I-15 SB ramps	34.2	C	37.6	D	37.0	D	2.8	No	66.7	E	29.1	Yes
8	Scripps Poway Pkwy / I-15 NB ramps	10.1	B	15.4	B	10.2	B	0.1	No	19.0	B	3.6	No
9	Scripps Poway Pkwy / Scripps Highlands Dr.	19.8	B	25.1	C	23.4	C	3.6	No	135.5	F	110.4	Yes
10	Scripps Highland Dr. / Scripps Gateway *	18.3	B	12.1	B	7.1	A	-11.2	No	20.7	C	8.6	No
11	Scripps Poway Pkwy / Scripps Summit Dr.	29.9	C	33.3	C	39.1	D	9.2	No	45.2	D	11.9	No
12	Scripps Poway Pkwy / Spring Canyon Rd.	27.1	C	39.9	D	29.1	C	2.0	No	49.4	D	9.5	No
13	Scripps Poway Pkwy / Scripps Creek Dr.	27.0	C	24.5	C	27.6	C	0.6	No	29.4	C	4.9	No
14	Scripps Poway Pkwy / Cypress Canyon Rd.	12.1	B	12.8	B	12.4	B	0.3	No	16.3	B	3.5	No
15	Scripps Poway Pkwy / Springbrook Dr.	23.0	C	33.2	C	23.1	C	0.1	No	43.1	D	9.9	No
16	Scripps Poway Pkwy / Pomerado Rd.	29.5	C	35.8	D	29.5	C	0.0	No	36.7	D	0.9	No
17	Scripps Poway Pkwy / Kirkham Rd.	13.8	B	24.6	C	14.3	B	0.5	No	25.8	C	1.2	No

Notes:

* = Outbound lane configuration improved per Watermark Site Plan.

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

TABLE 1-6

Horizon Year 2030 & Year 2030 with Project Intersection Summary

#	Intersection	Year 2030				Year 2030 + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Park Village Rd. / Black Mountain Rd.	56.0	E	45.0	D	56.5	E	0.5	No	46.8	D	1.8	No
2	Mercy Rd. / Black Mountain Rd.	34.0	C	35.2	D	34.5	C	0.5	No	37.5	D	2.3	No
3	Westview Pkwy / Black Mountain Rd.	16.8	B	20.8	C	16.9	B	0.1	No	22.3	C	1.5	No
4	Capricorn Way / Black Mountain Rd.	45.1	D	40.7	D	46.2	D	1.1	No	42.6	D	1.9	No
5	Kika Ct. / Mercy Rd.	6.4	A	6.5	A	6.5	A	0.1	No	7.1	A	0.6	No
6	Mercy Rd. / Alemania Rd.	15.4	B	12.3	B	15.6	B	0.2	No	12.7	B	0.4	No
7	Mercy Rd. / I-15 SB ramps	35.0	C	39.2	D	38.6	D	3.6	No	68.3	E	29.1	Yes
8	Scripps Poway Pkwy / I-15 NB ramps	10.5	B	27.6	C	11.6	B	1.1	No	30.5	C	2.9	No
9	Scripps Poway Pkwy / Scripps Highlands Dr.	22.0	C	30.3	C	24.7	C	2.7	No	178.6	F	148.3	Yes
10	Scripps Highlands Dr. / Scripps Gateway Ct. *	18.3	B	12.2	B	7.1	A	-11.2	No	21.3	C	9.1	No
11	Scripps Poway Pkwy / Scripps Summit Dr.	32.4	C	48.8	D	41.8	D	9.4	No	52.7	D	3.9	No
12	Scripps Poway Pkwy / Spring Canyon Rd.	33.1	C	34.6	C	34.7	C	1.6	No	51.8	D	17.2	No
13	Scripps Poway Pkwy / Scripps Creek Dr.	27.2	C	25.2	C	27.6	C	0.4	No	28.5	C	3.3	No
14	Scripps Poway Pkwy / Cypress Canyon Rd.	12.5	B	13.9	B	14.0	B	1.5	No	19.0	B	5.1	No
15	Scripps Poway Pkwy / Springbrook Dr.	32.4	C	48.2	D	33.3	C	0.9	No	51.9	D	3.7	No
16	Scripps Poway Pkwy / Pomerado Rd.	37.9	D	44.7	D	38.2	D	0.3	No	47.1	D	2.4	No
17	Scripps Poway Pkwy / Kirkham Rd.	17.2	B	35.8	D	17.5	B	0.3	No	39.8	D	4.0	No

Notes:

* = Outbound lane configuration improved per Watermark Site Plan.

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

TABLE 1-7
Existing With & Without Project Ramp Meter Significance

Most Restrictive Meter Rate

Location		Existing Without Project		Existing With Project		Freeway LOS*	∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)			
Mercy Road / I-15 SB On Ramp (2-SOV)	AM	9.86	2,001	12.01	2,438	D	2.15	NO
	PM	27.19	5,336	43.98	8,630	D	16.79	NO
Mercy Road / I-15 SB On Ramp (1-HOV)	AM	0.00	0	0.00	0	D	0.00	NO
	PM	0.00	0	0.00	0	D	0.00	NO
Scripps Poway Pkwy. / I-15 NB On Ramp (2-SOV)	AM	Ramp Meter is not turned on in this Peak						
	PM	33.33	4,350	47.51	6,200	C	14.18	NO
Scripps Poway Pkwy. / I-15 NB On Ramp (1-HOV)	AM	Ramp Meter is not turned on in this Peak						
	PM	0.00	0	0.00	0	C	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes and freeway LOS E and ramp delay is 15 minutes or more

S = Significant, if change in delay is greater than 1 minutes and freeway LOS F and ramp delay is 15 minutes or more

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

*=taken from Table 1-10

The highest per lane demand is used in delay and queue calculations

Location		Ramp Meter Lanes	Maximum Observed Delay (Min)	Maximum Observed Queue (Feet)
Mercy Road / I-15 SB On Ramp	AM	2-SOV/ 1-HOV	3.0	750
	PM		2.5	650
Scripps Poway Pkwy. / I-15 NB On Ramp	AM	2-SOV/ 1-HOV	Not Turned On	
	PM		1.5	400

NOTE:

SOV = Single Occupancy Vehicle Lane

HOV = High Occupancy Vehicle Lane

TABLE 1-8

Near Term With & Without Project Ramp Meter Significance

Most Restrictive Meter Rate

Location		Near Term Without Project		Near Term With Project		Freeway LOS*	∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)			
Mercy Road / I-15 SB On Ramp (2-SOV)	AM	10.67	2,166	12.83	2,604	D	2.15	NO
	PM	28.23	5,540	45.02	8,835	D	16.79	NO
Mercy Road / I-15 SB On Ramp (1-HOV)	AM	0.00	0	0.00	0	D	0.00	NO
	PM	0.00	0	0.00	0	D	0.00	NO
Scripps Poway Pkwy. / I-15 NB On Ramp (2-SOV)	AM	Ramp Meter is not turned on in this Peak						
	PM	33.90	4,424	48.08	6,274	C	14.18	NO
Scripps Poway Pkwy. / I-15 NB On Ramp (1-HOV)	AM	Ramp Meter is not turned on in this Peak						
	PM	0.00	0	0.00	0	C	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes and freeway LOS E and ramp delay is 15 minutes or more

S = Significant, if change in delay is greater than 1 minutes and freeway LOS F and ramp delay is 15 minutes or more

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

*=taken from Table 1-11

The highest per lane demand is used in delay and queue calculations

**TABLE 1-9
Horizon Year 2030 & Year 2030 + Project Ramp Meter Significance**

Most Restrictive Meter Rate

Location		Year 2030 Without Project		Year 2030 With Project		Freeway LOS*	∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)			
Mercy Road / I-15 SB On Ramp (2-SOV)	AM	47.46	9,635	49.62	10,072	D	2.15	NO
	PM	74.17	14,555	90.96	17,849	D	16.79	NO
Mercy Road / I-15 SB On Ramp (1-HOV)	AM	0.00	0	0.00	0	D	0.00	NO
	PM	0.00	0	0.00	0	D	0.00	NO
Scripps Poway Pkwy. / I-15 NB On Ramp (2-SOV)	AM	Ramp Meter is not turned on in this Peak						
	PM	77.56	10,121	91.74	11,972	D	14.18	NO
Scripps Poway Pkwy. / I-15 NB On Ramp (1-HOV)	AM	Ramp Meter is not turned on in this Peak						
	PM	0.00	0	0.33	43	D	0.33	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes and freeway LOS E and ramp delay is 15 minutes or more

S = Significant, if change in delay is greater than 1 minutes and freeway LOS F and ramp delay is 15 minutes or more

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

*=taken from Table 1-12

The highest per lane demand is used in delay and queue calculations

TABLE 1-10

Existing With & Without Project Freeway Segment Significance

Segment	Dir.	Capacity	# of Lanes	Peak Hour %	Dir. Split	Existing				Existing with Project				Δ	Sig.?
						Vol.	PHV	V/C	LOS	Vol.	PHV	V/C	LOS		
I-15															
SR-163/SR-52	NB	11,750	5-GP	0.075	0.55	176,000	7,314	0.622	C	177,484	7,376	0.628	C	0.006	NO
SR-163/SR-52	SB	11,750	5-GP	0.081	0.53	176,000	7,534	0.641	C	177,484	7,597	0.647	C	0.006	NO
Miramar Road/ SR-163	NB	19,810	7-GP+2-M	0.075	0.55	296,000	12,301	0.621	C	298,597	12,409	0.626	C	0.005	NO
Miramar Road/ SR-163	SB	19,810	7-GP+2-M	0.081	0.53	296,000	12,670	0.640	C	298,597	12,781	0.645	C	0.006	NO
Carroll Canyon Road/Miramar Road	NB	15,110	5-GP+2-M	0.075	0.55	275,000	11,428	0.756	C	278,339	11,567	0.764	C	0.007	NO
Carroll Canyon Road/Miramar Road	SB	15,110	5-GP+2-M	0.081	0.53	275,000	11,771	0.779	C	278,339	11,914	0.787	C	0.007	NO
Carroll Canyon Road/ Mira Mesa Blvd.	NB	15,110	5-GP+2-M	0.075	0.55	257,000	10,680	0.707	C	260,896	10,842	0.714	C	0.008	NO
Carroll Canyon Road/ Mira Mesa Blvd.	SB	15,110	5-GP+2-M	0.083	0.57	257,000	12,178	0.806	D	260,896	12,363	0.815	D	0.009	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	NB	15,110	5-GP+2-M	0.081	0.53	248,000	10,534	0.697	C	253,380	10,763	0.706	C	0.008	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	SB	15,110	5-GP+2-M	0.082	0.58	248,000	11,760	0.778	C	253,380	12,015	0.788	D	0.009	NO
Scripps Poway Pkwy./Poway Road	NB	15,110	5-GP+2-M	0.081	0.53	236,000	10,024	0.663	C	239,154	10,158	0.667	C	0.004	NO
Scripps Poway Pkwy./Poway Road	SB	15,110	5-GP+2-M	0.082	0.58	236,000	11,191	0.741	C	239,154	11,340	0.745	C	0.004	NO
Poway Road/ SR-56	NB	15,110	5-GP+2-M	0.077	0.52	208,000	8,393	0.555	B	211,339	8,528	0.559	B	0.004	NO
Poway Road/ SR-56	SB	15,110	5-GP+2-M	0.078	0.57	208,000	9,311	0.616	B	211,339	9,461	0.620	C	0.004	NO
SR-56/ Carmel Mountain Road	NB	18,470	5-GP+4-M	0.077	0.52	225,000	9,079	0.492	B	227,041	9,161	0.494	B	0.002	NO
SR-56/ Carmel Mountain Road	SB	18,470	5-GP+4-M	0.078	0.57	225,000	10,072	0.545	B	227,041	10,164	0.548	B	0.002	NO
Carmel Mountain Road/ Camino Del Norte	NB	18,470	5-GP+4-M	0.077	0.52	213,000	8,595	0.465	B	214,670	8,662	0.467	B	0.002	NO
Carmel Mountain Road/ Camino Del Norte	SB	18,470	5-GP+4-M	0.078	0.57	213,000	9,535	0.516	B	214,670	9,610	0.518	B	0.002	NO
Camino Del Norte/ Rancho Bernardo Road	NB	18,470	5-GP+4-M	0.077	0.52	209,000	8,433	0.457	B	210,299	8,486	0.458	B	0.001	NO
Camino Del Norte/ Rancho Bernardo Road	SB	18,470	5-GP+4-M	0.078	0.57	209,000	9,356	0.507	B	210,299	9,414	0.508	B	0.002	NO

Legend:

Vol.= Volume
Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

GP= General Purpose Lanes, Capacity= 2,350 vphpl
M= Managed Lanes, Capacity= 1,680 vphpl
PHV= Peak Hour Volume

TABLE 1-11

Near Term With & Without Project Freeway Segment Significance

Segment	Dir.	Capacity	# of Lanes	Peak Hour %	Dir. Split	Near Term				Near Term with Project				Δ	Sig.?
						Vol.	PHV	V/C	LOS	Vol.	PHV	V/C	LOS		
I-15															
SR-163/SR-52	NB	11,750	5-GP	0.075	0.554	177,557	7,379	0.628	C	179,041	7,440	0.633	C	0.005	NO
SR-163/SR-52	SB	11,750	5-GP	0.081	0.527	177,557	7,600	0.647	C	179,041	7,664	0.652	C	0.005	NO
Miramar Road/ SR-163	NB	19,810	7-GP+2-M	0.075	0.554	298,550	12,407	0.626	C	301,147	12,515	0.632	C	0.005	NO
Miramar Road/ SR-163	SB	19,810	7-GP+2-M	0.081	0.527	298,550	12,779	0.645	C	301,147	12,890	0.651	C	0.006	NO
Carroll Canyon Road/Miramar Road	NB	15,110	5-GP+2-M	0.075	0.554	277,646	11,538	0.764	C	280,985	11,677	0.773	C	0.009	NO
Carroll Canyon Road/Miramar Road	SB	15,110	5-GP+2-M	0.081	0.527	277,646	11,884	0.787	C	280,985	12,027	0.796	D	0.009	NO
Carroll Canyon Road/ Mira Mesa Blvd.	NB	15,110	5-GP+2-M	0.075	0.554	259,743	10,794	0.714	C	263,639	10,956	0.725	C	0.011	NO
Carroll Canyon Road/ Mira Mesa Blvd.	SB	15,110	5-GP+2-M	0.083	0.572	259,743	12,308	0.815	D	263,639	12,493	0.827	D	0.012	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	NB	15,110	5-GP+2-M	0.081	0.526	250,981	10,661	0.706	C	256,361	10,889	0.721	C	0.015	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	SB	15,110	5-GP+2-M	0.082	0.581	250,981	11,901	0.788	C	256,361	12,156	0.805	D	0.017	NO
Scripps Poway Pkwy./Poway Road	NB	15,110	5-GP+2-M	0.081	0.526	237,372	10,083	0.667	C	240,526	10,217	0.676	C	0.009	NO
Scripps Poway Pkwy./Poway Road	SB	15,110	5-GP+2-M	0.082	0.581	237,372	11,256	0.745	C	240,526	11,405	0.755	C	0.010	NO
Poway Road/ SR-56	NB	15,110	5-GP+2-M	0.077	0.522	209,327	8,446	0.559	B	212,666	8,581	0.568	B	0.009	NO
Poway Road/ SR-56	SB	15,110	5-GP+2-M	0.078	0.571	209,327	9,371	0.620	C	212,666	9,520	0.630	C	0.010	NO
SR-56/ Carmel Mountain Road	NB	18,470	5-GP+4-M	0.077	0.522	225,944	9,117	0.494	B	227,985	9,199	0.498	B	0.004	NO
SR-56/ Carmel Mountain Road	SB	18,470	5-GP+4-M	0.078	0.571	225,944	10,115	0.548	B	227,985	10,206	0.553	B	0.005	NO
Carmel Mountain Road/ Camino Del Norte	NB	18,470	5-GP+4-M	0.077	0.522	213,835	8,628	0.467	B	215,505	8,696	0.471	B	0.004	NO
Carmel Mountain Road/ Camino Del Norte	SB	18,470	5-GP+4-M	0.078	0.571	213,835	9,573	0.518	B	215,505	9,647	0.522	B	0.004	NO
Camino Del Norte/ Rancho Bernardo Road	NB	18,470	5-GP+4-M	0.077	0.522	209,648	8,459	0.458	B	210,947	8,512	0.461	B	0.003	NO
Camino Del Norte/ Rancho Bernardo Road	SB	18,470	5-GP+4-M	0.078	0.571	209,648	9,385	0.508	B	210,947	9,443	0.511	B	0.003	NO

Legend:

Vol.= Volume
Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

GP= General Purpose Lanes, Capacity= 2,350 vphpl
M= Managed Lanes, Capacity= 1,680 vphpl
PHV= Peak Hour Volume

TABLE 1-12

Horizon Year 2030 & Year 2030 + Project Freeway Segment Significance

Segment	Dir.	Capacity	# of Lanes	Peak Hour %	Dir. Split	Year 2030				Year 2030 with Project				Δ	Sig.?
						Vol.	PHV	V/C	LOS	Vol.	PHV	V/C	LOS		
I-15															
SR-163/SR-52	NB	14,100	6-GP	0.075	0.554	261,516	10,868	0.771	C	263,000	10,930	0.775	C	0.004	NO
SR-163/SR-52	SB	11,750	5-GP	0.081	0.527	261,516	11,194	0.953	E	263,000	11,258	0.958	E	0.005	NO
Miramar Road/ SR-163	NB	23,170	7-GP+4-M	0.075	0.554	409,403	17,014	0.734	C	412,000	17,122	0.739	C	0.005	NO
Miramar Road/ SR-163	SB	23,170	7-GP+4-M	0.081	0.527	409,403	17,524	0.756	C	412,000	17,635	0.761	C	0.005	NO
Carroll Canyon Road/Miramar Road	NB	23,170	7-GP+4-M	0.075	0.554	385,661	16,027	0.692	C	389,000	16,166	0.698	C	0.006	NO
Carroll Canyon Road/Miramar Road	SB	23,170	7-GP+4-M	0.081	0.527	385,661	16,508	0.712	C	389,000	16,651	0.719	C	0.006	NO
Carroll Canyon Road/ Mira Mesa Blvd.	NB	20,820	6-GP+4-M	0.075	0.554	378,104	15,713	0.755	C	382,000	15,875	0.762	C	0.008	NO
Carroll Canyon Road/ Mira Mesa Blvd.	SB	20,820	6-GP+4-M	0.083	0.572	378,104	17,917	0.861	D	382,000	18,102	0.869	D	0.009	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	NB	20,820	6-GP+4-M	0.081	0.526	381,620	16,210	0.779	C	387,000	16,438	0.790	C	0.011	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	SB	20,820	6-GP+4-M	0.082	0.581	381,620	18,096	0.869	D	387,000	18,351	0.881	D	0.012	NO
Scripps Poway Pkwy./Poway Road	NB	18,470	5-GP+4-M	0.081	0.526	347,846	14,775	0.800	D	351,000	14,909	0.807	D	0.007	NO
Scripps Poway Pkwy./Poway Road	SB	18,470	5-GP+4-M	0.082	0.581	347,846	16,494	0.893	D	351,000	16,644	0.901	D	0.008	NO
Poway Road/ SR-56	NB	18,470	5-GP+4-M	0.077	0.522	319,661	12,898	0.698	C	323,000	13,033	0.706	C	0.007	NO
Poway Road/ SR-56	SB	18,470	5-GP+4-M	0.078	0.571	319,661	14,310	0.775	C	323,000	14,460	0.783	C	0.008	NO
SR-56/ Carmel Mountain Road	NB	18,470	5-GP+4-M	0.077	0.522	334,959	13,516	0.732	C	337,000	13,598	0.736	C	0.004	NO
SR-56/ Carmel Mountain Road	SB	18,470	5-GP+4-M	0.078	0.571	334,959	14,995	0.812	D	337,000	15,086	0.817	D	0.005	NO
Carmel Mountain Road/ Camino Del Norte	NB	18,470	5-GP+4-M	0.077	0.522	323,330	13,047	0.706	C	325,000	13,114	0.710	C	0.004	NO
Carmel Mountain Road/ Camino Del Norte	SB	18,470	5-GP+4-M	0.078	0.571	323,330	14,474	0.784	C	325,000	14,549	0.788	C	0.004	NO
Camino Del Norte/ Rancho Bernardo Road	NB	18,470	5-GP+4-M	0.077	0.522	324,701	13,102	0.709	C	326,000	13,154	0.712	C	0.003	NO
Camino Del Norte/ Rancho Bernardo Road	SB	18,470	5-GP+4-M	0.078	0.571	324,701	14,536	0.787	C	326,000	14,594	0.790	D	0.003	NO

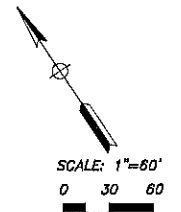
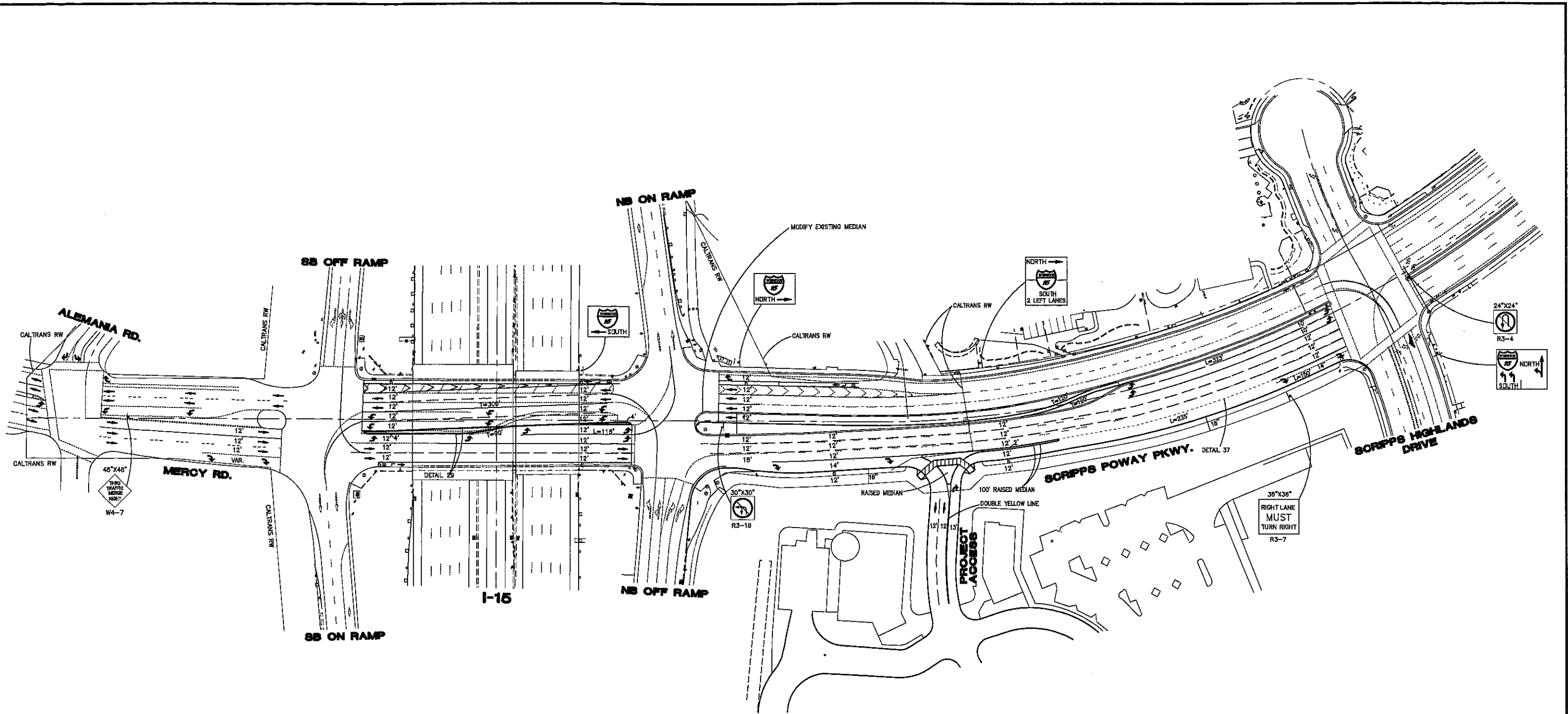
Legend:

Vol.= Volume
Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

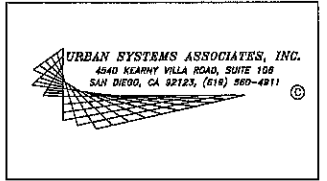
GP= General Purpose Lanes, Capacity= 2,350 vphpl
M= Managed Lanes, Capacity= 1,680 vphpl
PHV= Peak Hour Volume

(See Next Page)

Figure 1-1
Scripps Poway Parkway / I-15 Reconfigurations



CONCEPTUAL LAYOUT FOR
DISCUSSION PURPOSES ONLY
PLANS DO NOT REPRESENT
COMPLETED DESIGN



CONCEPTUAL STRIPING LAYOUT FOR:
SCRIPPS POWAY PARKWAY
FULL DUAL LEFTS TO SB/ NB RAMPS

Improvements to the intersection of Scripps Poway Parkway and Scripps Highland Drive are discussed in Section 12.0. These improvements include conversion of an existing through lane to a shared left and through lane to achieve a northbound triple left at this intersection. With these improvements, the anticipated LOS at the impacted intersections is shown on **Table 1-13**.

Synchro sheets showing the level of service results discussed above are included in **Appendix L**.

No further improvements are proposed. All intersection impacts would be mitigated to an acceptable LOS as discussed above. However, significant and unmitigated Impacts would result on several street segments at the following locations:

<u>Road</u>	<u>Segment</u>
Scripps Poway Pkwy.	I-15 NB / Scripps Highland Dr.
Scripps Poway Pkwy.	Scripps Highland Dr. / Scripps Summit Dr.
Scripps Poway Pkwy.	Scripps Summit Dr./ Spring Canyon Rd.
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Drive
Scripps Poway Pkwy.	Scripps Creek Dr. / Cypress Canyon Road
Scripps Poway Pkwy.	Cypress Canyon Road/ Angelique Street

Currently, the segments of Scripps Poway Parkway west of Spring Canyon Road are constructed to their ultimate Community Plan classification.

The street segment analysis indicates the potential for impacts on Scripps Poway Parkway between Spring Canyon Road and Angelique Street as well. However, upon closer inspection, the more detailed arterial analysis indicates that these road segments would experience an acceptable LOS with the project in all

TABLE 1-13

Near Term and Horizon Year 2030 Intersection Mitigation LOS Comparison

Near Term

#	Intersection	Near Term				Near Term with Project (unmitigated)				Near Term With Project (mitigated)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS	D	LOS	D	LOS			D	LOS		
7	Mercy Rd. / I-15 SB ramps	34.2	C	37.6	D	37.0	D	66.7	E	37.5	D	0.5	No	51.9	D	-14.8	No
9	Scripps Poway Pkwy / Scripps Highlands Dr.	19.8	B	25.1	C	23.4	C	135.5	F	35.5	D	12.1	No	52.4	D	-83.1	No

Notes:

LOS = Level of Service
 Δ = Change
 S = Significant
 D = Delay

Horizon Year

#	Intersection	Year 2030				Year 2030 with Project (unmitigated)				Year 2030 + Project (mitigated)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS	D	LOS	D	LOS			D	LOS		
7	Mercy Rd. / I-15 SB ramps	35.0	C	39.2	D	38.6	D	68.3	E	37.5	D	-1.1	No	54.8	D	-13.5	No
9	Scripps Poway Pkwy / Scripps Highlands Dr.	22.0	C	30.3	C	24.7	C	178.6	F	45.2	D	20.5	No	54.0	D	-124.6	No

Notes:

LOS = Level of Service
 Δ = Change
 S = Significant
 D = Delay

conditions. Therefore, although disclosed as an impact, it is anticipated that an acceptable LOS will be maintained in the future and no widening will be necessary.

2.0 INTRODUCTION

Urban Systems Associates, Inc. (USAI) was retained by Sudberry Properties to determine the potential transportation impacts and the appropriate mitigation measures for proposed project development of Watermark in the Miramar Ranch North Community. The proposed project is located on the Southeast corner of I-15 at Scripps Poway Parkway (See **Figure 2-1**). The Watermark development proposes a Community Plan Amendment and Rezone (as well as other discretionary actions) which is expected to include a mixed-use development including office and retail with a hotel in the likely development scenario. For purposes of this traffic study, a “maximum development” scenario was analyzed which would include 151,369 square feet of multi-tenant office (without Med-Impact), 316,000 square feet of regional shopping center, a 43,917 square foot movie theater and a 130 room hotel. The proposed development (without Med-Impact) would be expected to generate a maximum 21,509 ADT at driveways with 648 trips in the AM peak hour (501 inbound and 148 outbound) and 2,003 trips in the PM peak hour (978 inbound and 1,025 outbound). The proposed development would be expected to generate a maximum 18,552 cumulative ADT with 583 trips in the AM peak hour (455 inbound and 127 outbound) and 1,726 trips in the PM peak hour (838 inbound and 888 outbound).

Figure 2-2 shows the proposed Watermark site plan.

In order to determine the trip distribution and study area for the project, USAI used a SANDAG Series 11 select zone model run, see **Appendix A**. For study area purposes, USAI used City guidelines which use 50 trips in one direction during a peak hour as a threshold for study. Also, based on the City Guidelines, USAI used 50 peak directional trips as the basis for studying freeway segments and 20 peak trips for

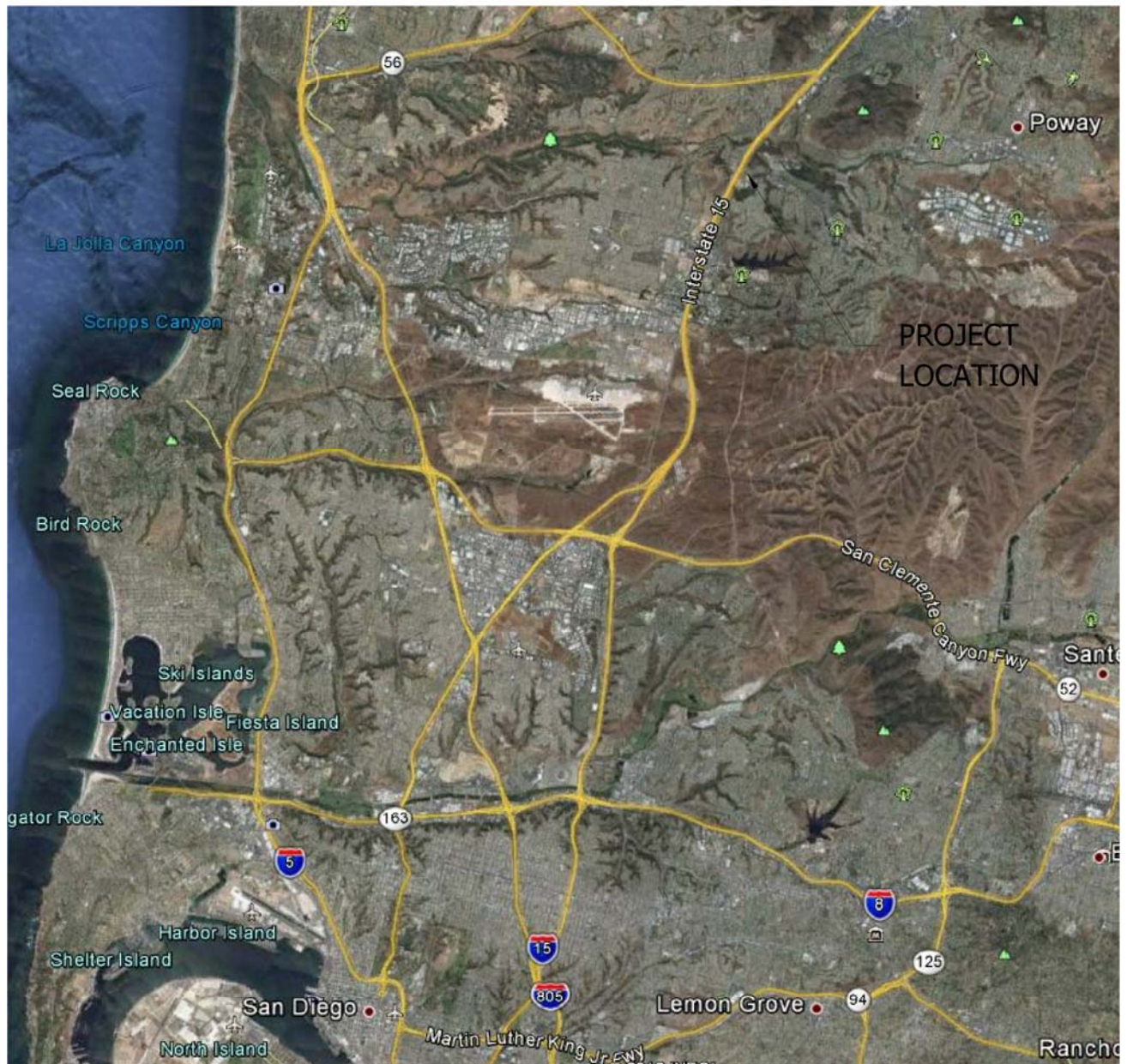
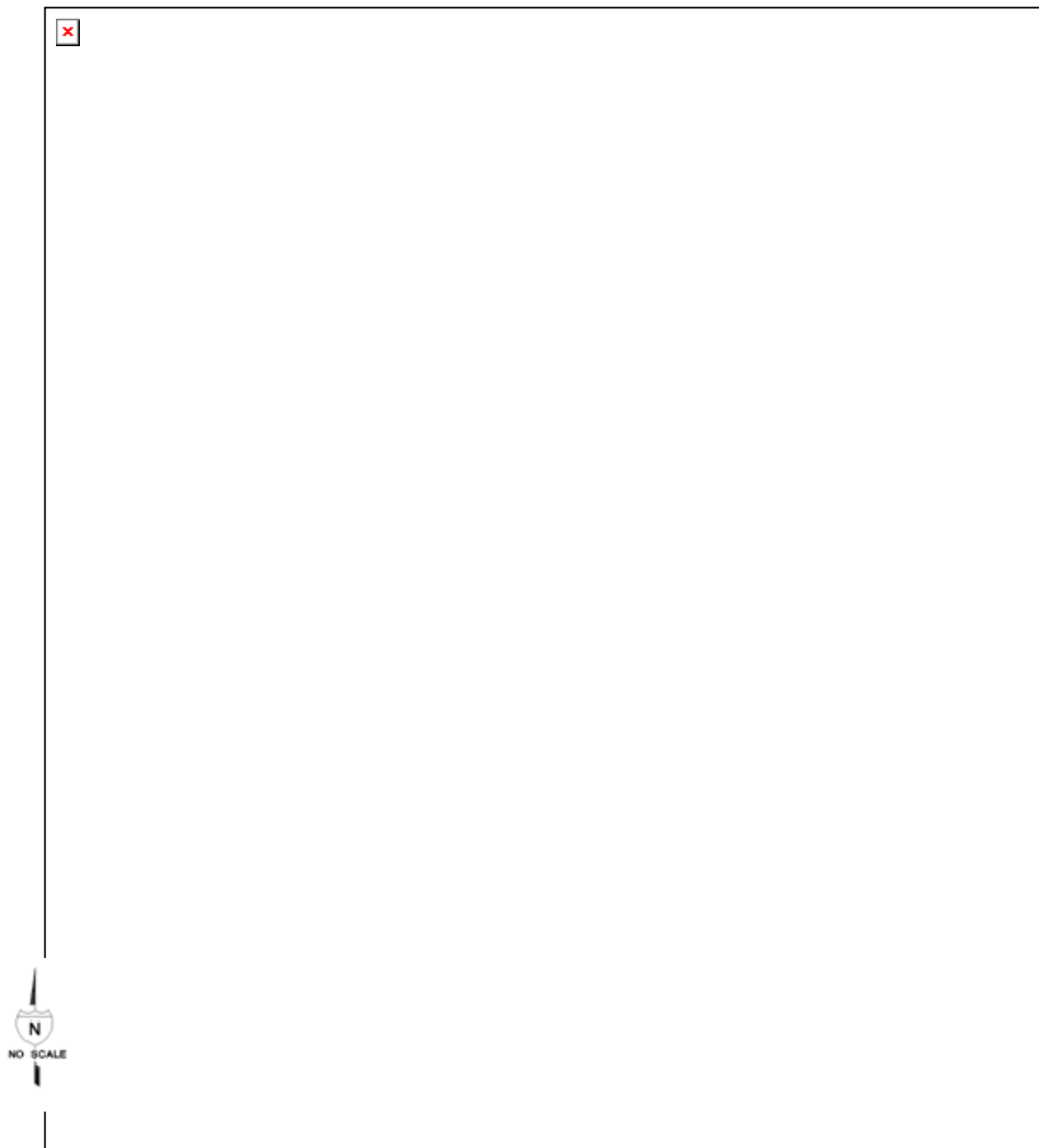


FIGURE 2-1
Project Location Map



Source: Andrew Hull Stevenson Architects

FIGURE 2-2
Project Site Plan

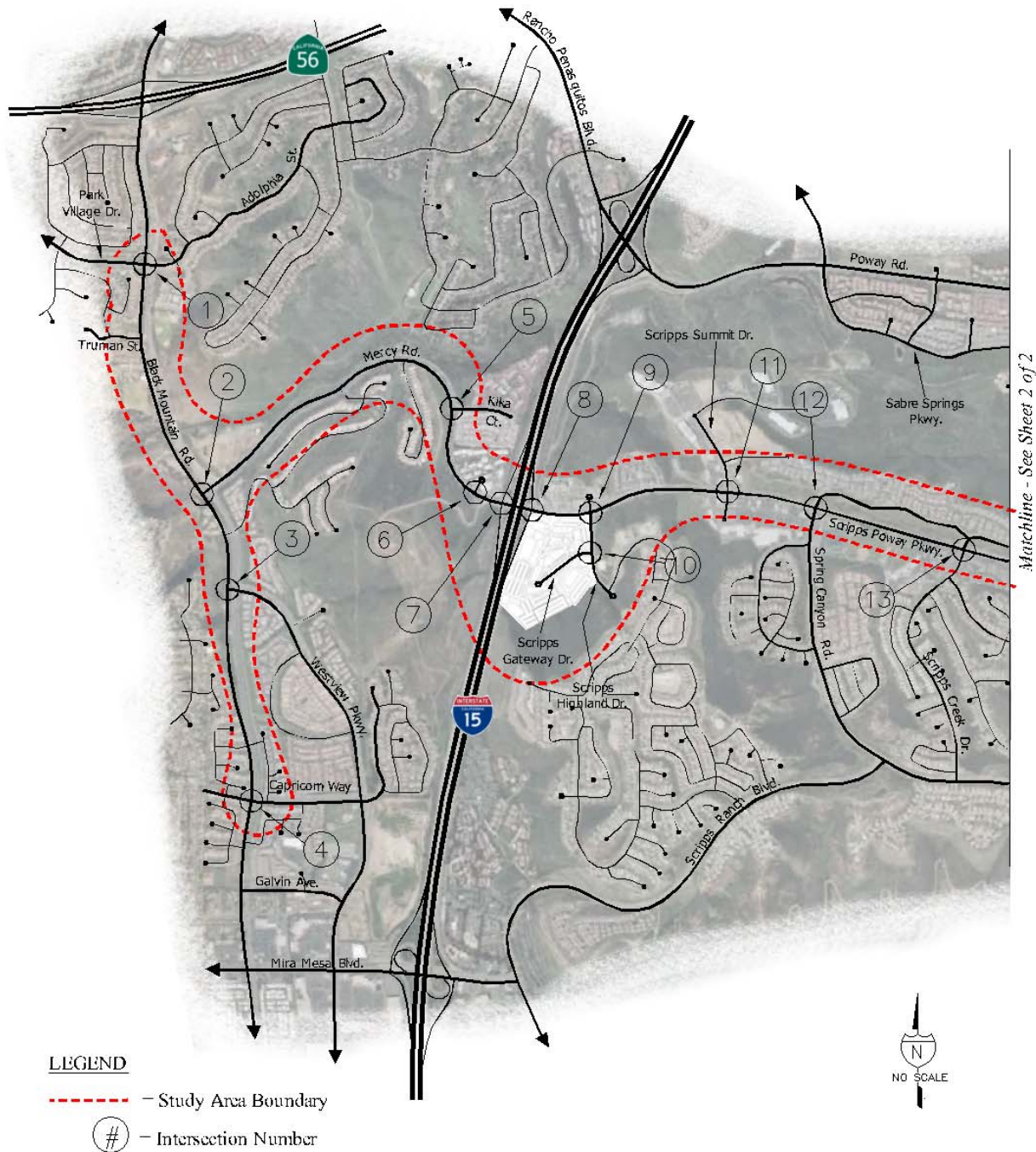
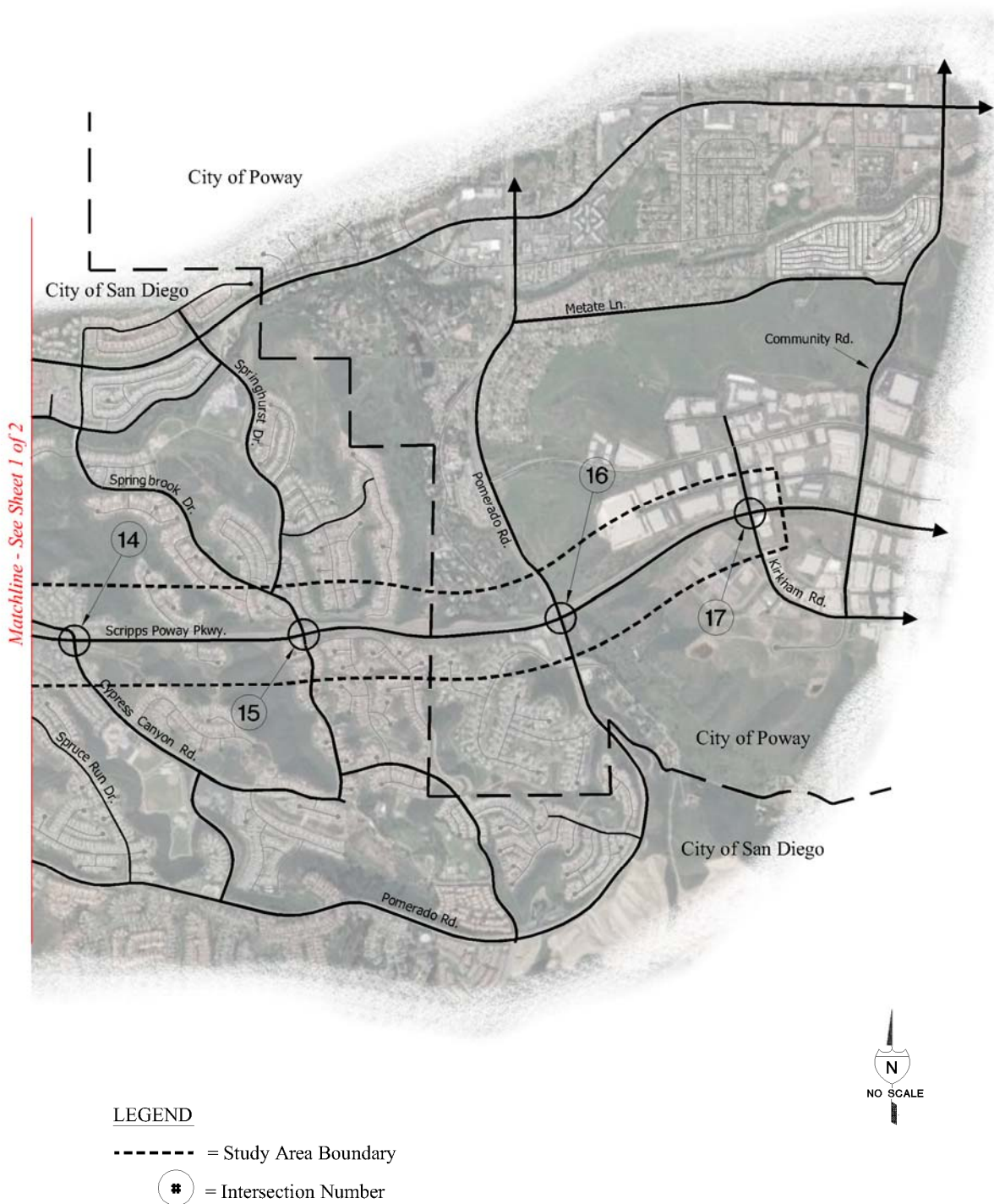


FIGURE 2-3

Study Area Boundary and Intersection Key



LEGEND

- - - - - = Study Area Boundary
- ⊛ = Intersection Number

FIGURE 2-3

Study Area Boundary and Intersection Key

TABLE 2-1
Study Area Street Segments & Intersections

Street Segments	
Road	Segment
Black Mountain Road	Mercy Rd. / Park village Dr.
	Westview Parkway / Mercy Rd.
	Capricorn Way / Westview Parkway
Mercy Road	Black Mountain Rd. / Kika Court
	Kika Court / Alemania Rd.
	Alemania Rd. / I-15 SB Ramps
Scripps Poway Parkway	I-15 NB Ramps / Scripps Highland Dr.
	Scripps Highland Dr. / Scripps Summit Dr.
	Scripps Summit Dr. / Spring Canyon Rd.
	Spring Canyon Rd. / Scripps Creek Dr.
	Scripps Creek Dr. / Cypress Canyon Rd.
	Cypress Canyon Rd. / Vail Court
	Angelique Street / Pomerado Rd.
	Pomerado Rd. / Kirkham Rd.

Intersections	
Number	Intersection
1	Park Village Rd. / Black Mountain Rd.
2	Mercy Rd. / Black Mountain Rd.
3	Westview Pkwy / Black Mountain Rd.
4	Capricorn Way / Black Mountain Rd.
5	Kika Ct. / Mercy Rd.
6	Mercy Rd. / Alemania Rd.
7	Mercy Rd. / I-15 SB ramps
8	Scripps Poway Pkwy / I-15 NB ramps
9	Scripps Poway Pkwy / Scripps Highlands Dr.
10	Scripps Highlands Dr. / Scripps Gateway Ct.
11	Scripps Poway Pkwy / Scripps Summit Dr.
12	Scripps Poway Pkwy / Spring Canyon Rd.
13	Scripps Poway Pkwy / Scripps Creek Dr.
14	Scripps Poway Pkwy / Cypress Canyon Rd.
15	Scripps Poway Pkwy / Springbrook Dr.
16	Scripps Poway Pkwy / Pomerado Rd.
17	Scripps Poway Pkwy / Kirkham Rd.

studying metered freeway on-ramps. Using the 50 trip threshold for study, the study area would encompass anywhere the project distribution shows 5.6% of project traffic or more. Utilizing the 20 trip rule for ramps, the project would have to have 2.3% of project trips or more in order to trigger the threshold for study. For Freeways, the 50 peak hour trip threshold would also occur if more than 5.6% of project trips were distributed on a given segment. The study area was agreed upon based on a consultation with City Transportation staff. **Figure 2-3** shows the study area boundary and the intersection key selected for the study. USAI then gathered information or oversaw the machine and manual traffic counts of the existing ADT and peak hour traffic flow data for the study intersections and street segments. **Table 2-1** shows the study area street segments and intersections.

In order to summarize project impacts and required mitigation this report is divided into the following text sections:

- 1.0 Executive Summary
- 2.0 Introduction
- 3.0 Proposed Project
- 4.0 Methodology
- 5.0 Existing Conditions
- 6.0 Existing With Project
- 7.0 Other Projects
- 8.0 Near Term Without Project

- 9.0 Near Term With Project
- 10.0 Horizon Year 2030 Without Project
- 11.0 Horizon Year 2030 With Project
- 12.0 Transit, Parking and Onsite Circulation
- 13.0 Freeway and Ramp Meter Analysis
- 14.0 Conclusions and Recommendations

3.0 PROPOSED PROJECT

As discussed previously on pg. 2-1, a “maximum development” scenario was analyzed for the proposed Watermark project. Uses and intensities from the development range were selected which would represent the highest possible trip generation for the project and which would establish an envelope for the project from a trip generation perspective. Any development scenario within this envelope would have impacts less than what is shown in this traffic study. This development area does not include existing or proposed Med-Impact office buildings which are not a part of the Watermark project.

3.1 TRIP GENERATION

A trip generation table for the project was developed as shown in **Table 3-1**. This table utilizes Cumulative trip rates which are utilized for determining impacts to intersections and street segments not immediately adjacent to the project site. **Table 3-2** shows the expected trip generation at the project driveways. This table does not take into account traffic which would otherwise exist on adjacent streets and may “stop-over” at a project in the course of a normal commute. Therefore, the driveway trip generation shown in **Table 3-2** is used for access analysis purposes but not for offsite impact analysis purposes. It should be noted that a significant amount of hotel traffic will be expected to utilize the facilities provided in the shopping center and is intended to support the office buildings. Therefore, a “mixed-use” trip reduction of up to 10% was taken to account for this.

3.2 PROJECT TRAFFIC

Figure 3-1 shows the project trip distribution percentages which were derived from SANDAG's Series 11 Traffic Model. **Figure 3-2** shows the project average daily traffic volumes which are based on the daily traffic generation from **Table 3-1** and the distribution of project traffic from **Figure 3-1**. **Figure 3-3** shows the project peak trips in the peak direction for the study area.

Figure 3-4 shows the anticipated AM/PM peak hour project only traffic.

TABLE 3-1
Project Cumulative Trip Generation

Use	Amount	Trip Rate	ADT	AM Peak Hour					PM Peak Hour				
				%	#	In/Out	In	Out	%	#	In/Out	In	Out
Multi Tenant Office	151,369 SF	$\frac{\ln(T)=0.756}{\ln(x)+3.95}$	2,310	13%	300	9 : 1	270	30	14%	323	2 : 8	65	259
<i>SubTotal</i>			2,310		300		270	30		323		65	259
Mixed Use Reduction %			3%		5%		5%	5%		4%		4%	4%
Office Mixed-Use Reduct.			-69		-15		-14	-2		-13		-3	-10
Office SubTotal			2,240		285		257	29		310		62	248
Hotel	130 rm	10 /rm	1,300	6%	78	6 : 4	47	31	8%	104	6 : 4	62	42
Mixed Use Reduction %			10%		8%		8%	8%		10%		10%	10%
Hotel M-U Reduct.			-130		-6		-4	-2		-10		-6	-4
Hotel SubTotal			1,170		72		43	29		94		56	37
Retail	316,000 SF	$\frac{\ln(t)=.756*\ln(x)+5.25*0.8}{x}$	11,828	2%	237	7 : 3	166	71	9%	1,064	5 : 5	532	532
Movie	43,917 SF	80 /1000 SF	3,513	0%	11	7 : 3	7	3	8%	281	7 : 3	197	84
Reduction in Retail Trips			-199		-21		-17	-4		-23		-9	-15
Retail SubTotal			15,142		226		156	70		1,322		720	602
Total			18,552		583		455	127		1,726		838	888

Notes:

Source - City of San Diego Trip Generation Manual, 2003

Mixed Use Reduction % - City of San Diego Traffic Impact Study Manual, July 1998

TABLE 3-2
Project Driveway Trip Generation

Use	Amount	Trip Rate	ADT	AM Peak Hour						PM Peak Hour				
				%	#	In/Out	In	Out	%	#	In/Out	In	Out	
Multi Tenant Office	151,369 SF	$\frac{\ln(T)=0.756}{\ln(x)+3.95}$	2,310	13%	300	9 : 1	270	30	14%	323	2 : 8	65	259	
SubTotal			2,310		300		270	30		323		65	259	
Mixed Use Reduction %			3%		5%		5%	5%		4%		4%	4%	
Office Mixed-Use Reduct.			-69		-15		-14	-2		-13		-3	-10	
Office Sub Total			2,240		285		257	29		310		62	248	
Hotel	130 rm	10 /rm	1,300	6%	78	6 : 4	47	31	8%	104	6 : 4	62	42	
Mixed Use Reduction %			10%		8%		8%	8%		10%		10%	10%	
Hotel M-U Reduct.			-130		-6		-4	-2		-10		-6	-4	
Hotel Sub Total			1,170		72		43	29		94		56	37	
Retail	316,000 SF	$\frac{\ln(t)=.756*\ln(x)+5.25}{x}$	14,785	2%	296	7 : 3	207	89	9%	1,331	5 : 5	665	665	
Movie	43,917 SF	80 /1000 SF	3,513	0%	11	7 : 3	7	3	8%	281	7 : 3	197	84	
Reduction in Retail Trips			-199		-21		-17	-4		-23		-9	-15	
Retail Sub Total			18,099		285		197	88		1,588		853	735	
Total			21,509		648		501	148		2,003		978	1,025	

Notes:

Source - City of San Diego Trip Generation Manual, 2003

Mixed Use Reduction % - City of San Diego Traffic Impact Study Manual, July 1998



FIGURE 3-1
Project Traffic Distribution



Matchline - See Sheet 2 of 2

FIGURE 3-2
Project Only (ADT) Traffic Assignment



FIGURE 3-2

Project Only (ADT) Traffic Assignment

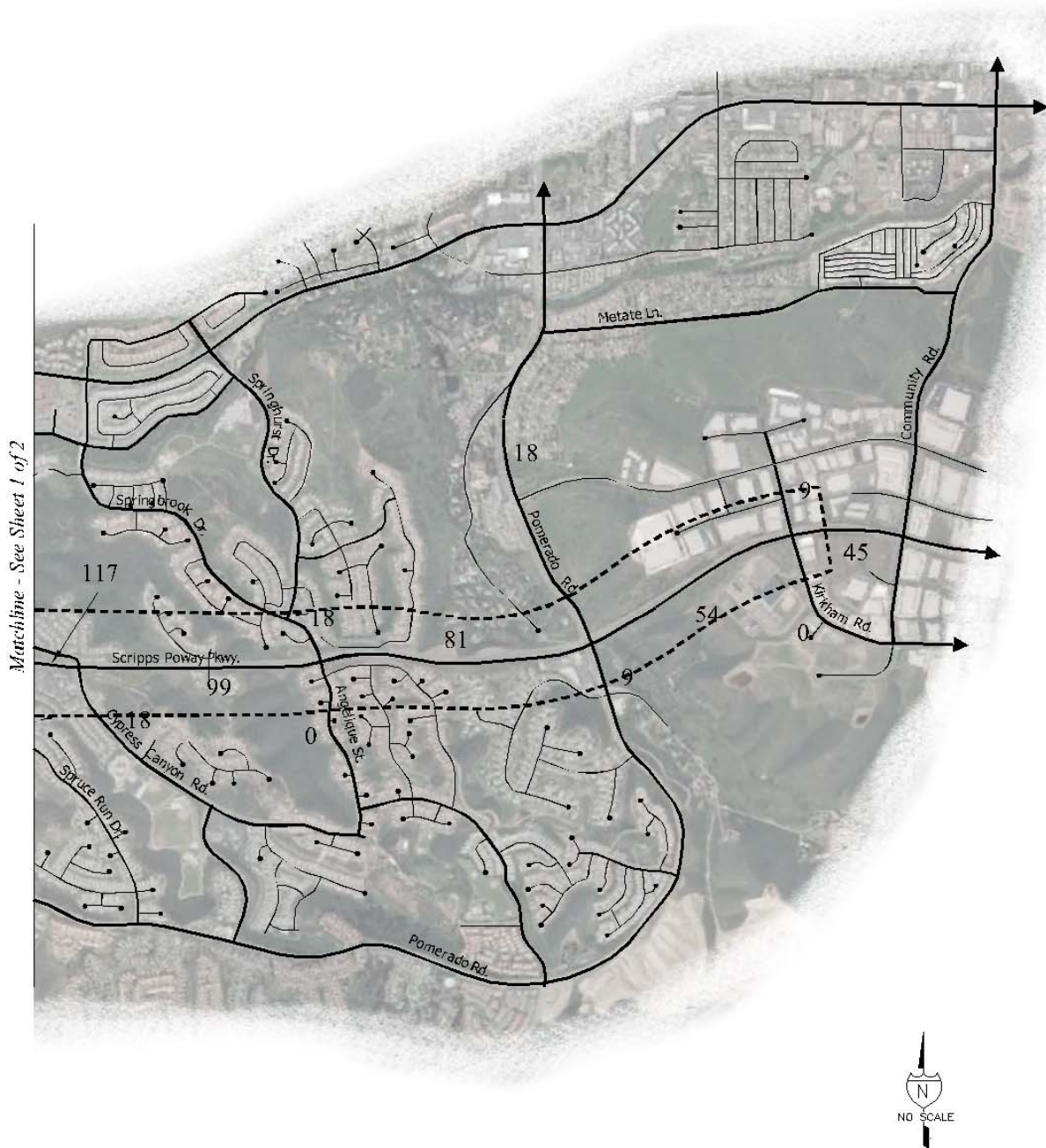


FIGURE 3-3
Project Only (peak hour) Traffic Assignment

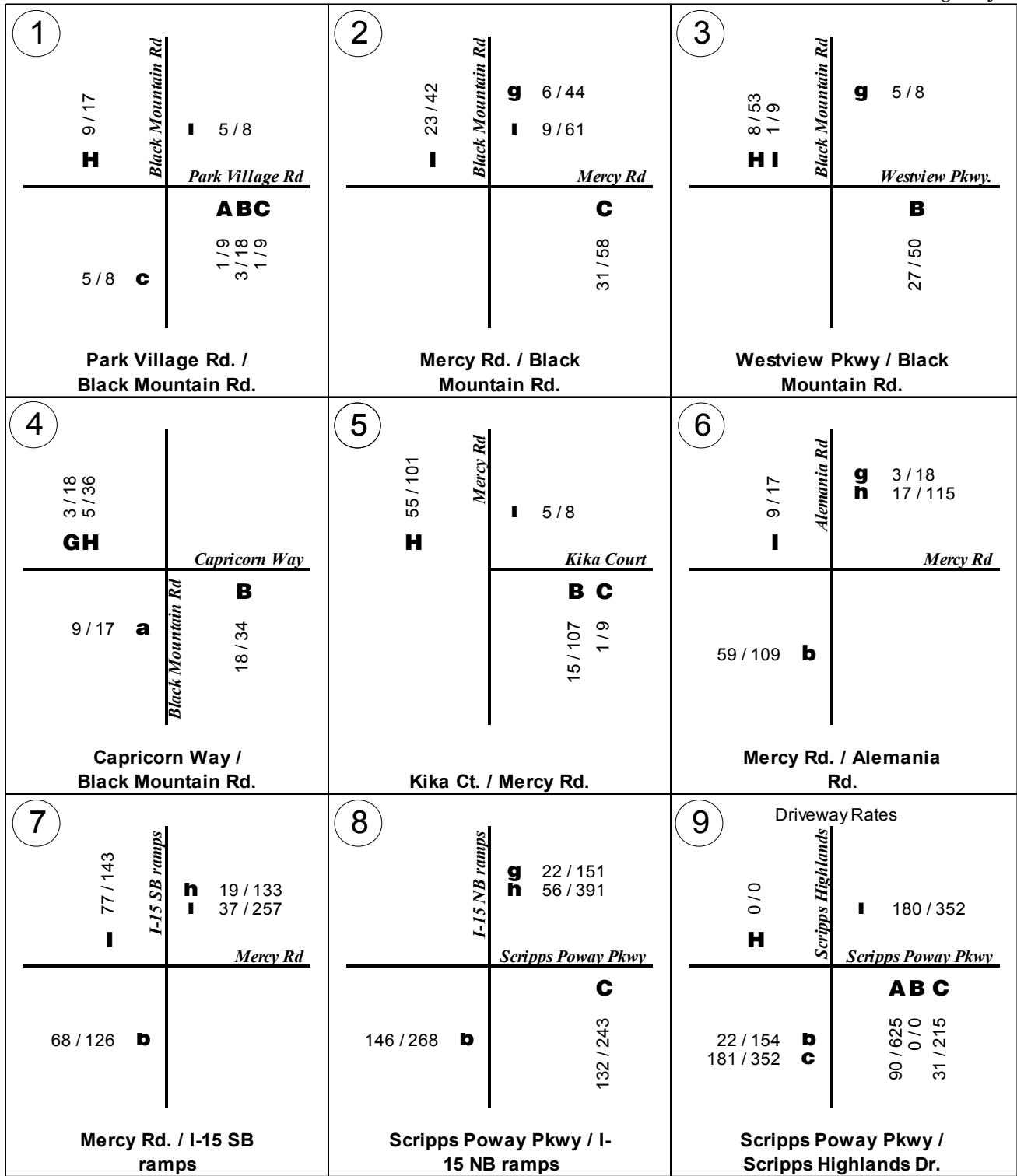


FIGURE 3-4

Project Only AM / PM Peak Hour Traffic

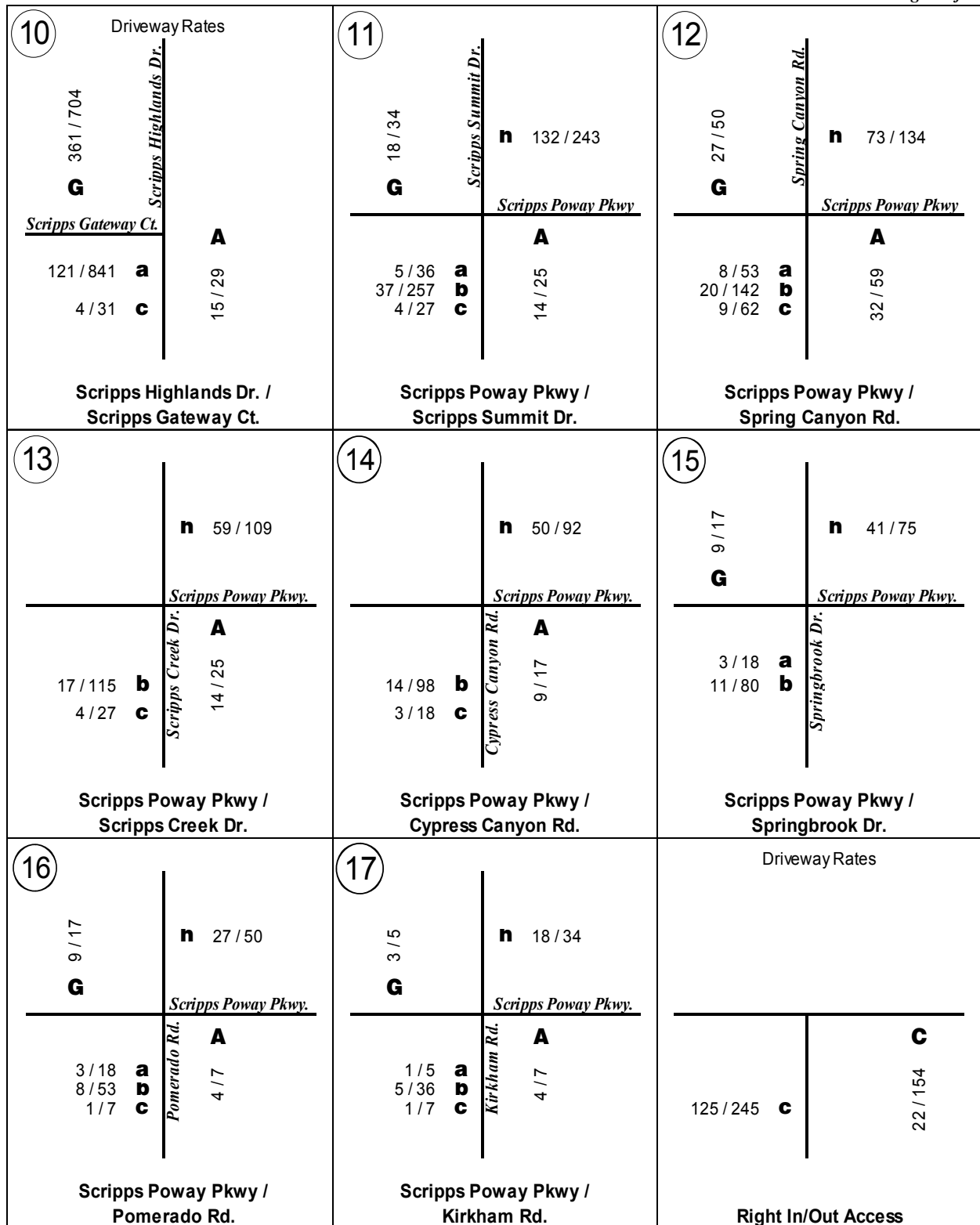


FIGURE 3-5



Project Only AM / PM Peak Hour Traffic

4.0 METHODOLOGY

This section of the report describes various analysis procedures and criteria that are used to determine if the proposed project has a significant impact. Two criteria must be met before an impact is considered significant. First, the intersection or street segment must have an after project unacceptable level of service (LOS) after project traffic is added, i.e. E or F as discussed below. Second, the amount of project traffic must be significant based on the application of criteria also discussed below. For an intersection, if the change in delay is greater than 2 seconds or 1 second and the level of service is “E” or “F” respectively, then the intersection project impacts would be considered significant or if project traffic would take the facility from an acceptable to unacceptable level of service. For a regionally significant arterial street segment analyzed with an arterial analysis, if the reduction in travel speed exceeds 1mph or 0.5 mph, and the level of service is “E” or “F” respectively, then the street segment would be considered significant. For street segments analyzed with the volume to capacity method, if the change in volume to capacity (v/c) ratio exceeds 0.02 or 0.01 for LOS “E” and “F” respectively, a project impact would be considered significant. If project traffic causes an intersection, roadway segment, or freeway segment to degrade from LOS “D” to LOS “E” or LOS “F” or exceeds the threshold above, project mitigation is required. For freeway segment impacts to be considered significant, the segment would need to operate at unacceptable levels of service and exceed a change in v/c ratio of 0.01 or 0.005 for LOS “E” and “F” respectively or if project traffic takes it from an acceptable to unacceptable level of service. A ramp meter impact would be significant if the change in delay is greater than 2 minutes or 1 minute for a ramp experiencing delay in excess of 15 minutes delay. Significance determination thresholds are determined based on criteria contained in the City of San Diego, CEQA, Significance Determination Thresholds publication, January 2011.

4.1 CITY OF SAN DIEGO GUIDELINES

The City of San Diego has developed a Traffic Impact Study Manual (7/98). The stated purpose of the Traffic Impact Study Manual is “...to ensure consistency with all applicable City and State regulations.” The Traffic Impact Study Manual provides guidance regarding preparation of traffic impact reports in the City of San Diego. Since the proposed project is located in City of San Diego, this traffic impact report follows the procedures outlined in their traffic manual. The manual includes guidelines for forecasting, trip generation and assignment, and analysis procedures.

The City’s Traffic Impact Study Manual also establishes criteria and methods for analyzing study area street segments. Specifically, Congestion Management Program (CMP) arterial roadways must be analyzed utilizing the peak hour method found in Chapter 11 of the current Highway Capacity Manual (HCM). As a CMP arterial roadway, Scripps Poway Parkway was analyzed utilizing this method.

The manual also establishes criteria for measuring project impacts at intersections. The City Traffic Impact Study Manual specifies use of the most current Highway Capacity Manual (HCM) operational method for studying intersections. The most current HCM is HCM 2000. For analyzing intersections, a software package called Synchro is used. This software package has been found to be acceptable for analysis within the City of San Diego.

4.2 TRIP DISTRIBUTION

The projected trips were distributed based on a Series 11 travel forecast. See [Appendix A](#) for the SANDAG Select Zone forecast plots.

4.3 STREET SEGMENT LEVEL OF SERVICE

When analyzing street segments, the level of service (LOS) must be determined. LOS is a measure used to describe the conditions of traffic flow. LOS is expressed using letter designations from “A” to “F”. LOS “A” represents the best case, and LOS “F” represents the worst case. Generally LOS “A” through “C” represents free flowing traffic conditions with little or no delay. LOS “D” represents limited congestion and some delay. However, the duration of periods of delay is acceptable to most people. LOS “E” and “F” represent significant delays on local streets, which are generally unacceptable for urban design purposes. The LOS descriptions are from Chapter 9 of the Highway Capacity Manual (Transportation Research Board, 2000). **Table 4-1** shows the City of San Diego, Roadway Classification and Level of Service table.

4.4 INTERSECTION LOS PROCEDURES

The City and Regional Congestion Management Program (CMP) guidelines, as adopted by SANDAG, determine the procedures to be used for intersection peak hour analysis. To determine an intersection peak hour LOS, the CMP guidelines require use of the most recent procedure from Chapter 16 of the Highway Capacity Manual (Transportation Research Board, 2000). The procedure in Chapter 16 which is used to analyze signalized intersection is the “operational method.” This method determines LOS based on average control delay expressed in seconds. **Table 4-2** shows the LOS based upon the delay. A

TABLE 4-1

Roadway Classifications and Levels of Service

STREET CLASSIFICATION	LANES	LEVEL OF SERVICE				
		A	B	C	D	E
Freeway	8 lanes	60,000	84,000	120,000	140,000	150,000
Freeway	6 lanes	45,000	63,000	90,000	110,000	120,000
Freeway	4 lanes	30,000	42,000	60,000	70,000	80,000
Expressway	6 lanes	30,000	42,000	60,000	70,000	80,000
Primary Arterial	6 lanes	25,000	35,000	50,000	55,000	60,000
Major Arterial	6 lanes	20,000	28,000	40,000	45,000	50,000
Major Arterial	4 lanes	15,000	21,000	30,000	35,000	40,000
Collector	4 lanes	10,000	14,000	20,000	25,000	30,000
Collector (no center lane) continuous left-turn lane)	4 lanes 2 lanes	5,000	7,000	10,000	13,000	15,000
Collector (no fronting property)	2 lanes	4,000	5,500	7,500	9,000	10,000
Collector (commercial-industrial fronting)	2 lanes	2,500	3,500	5,000	6,500	8,000
Collector (multifamily)	2 lanes	2,500	3,500	5,000	6,500	8,000
Sub-Collector (single-family)	2 lanes	—	—	2,200	—	—

Legend

XX/XXX= Approximate recommended ADT based on the City of San Diego Street Design Manual.

NOTES:

1. The volumes and the average daily level of service listed above are only intended as a general planning guideline.
2. 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.

TABLE 4-2

Level of Service Criteria For Signalized Intersections

Level of Service	Control Delay Per Vehicle (sec)
A	>10
B	>10 and <20
C	>20 and <35
D	>35 and <55
E	>55 and <80
F	>80

Source: Table 9-1, Highway Capacity Manual, 2000

Level of Service Criteria For Unsignalized Intersections

Level of Service	Control Delay Per Vehicle (sec)
A	>10
B	>10 and <15
C	>15 and <25
D	>25 and <35
E	>35 and <50
F	>50

Source: Table 10-7, Highway Capacity Manual, 2000

computer program is used to complete the analysis. As discussed above, the City and CMP guidelines have established LOS “D” or better as the objective for intersections and street segments.

Currently, many of the intersections within the project study area operate as a coordinated system. Therefore, changes in volumes and delay at one intersection will influence results at other intersections in the corridor. In some instances, this will cause delay to improve slightly. This may result from additional green time being allocated to through moves on the arterial roadway.

4.5 CMP ENHANCED CEQA REVIEW GUIDELINES

As discussed above, the Congestion Management Program regional guidelines were developed by SANDAG to provide a set of procedures for completing enhanced CEQA review for certain projects. The guidelines, prepared by the San Diego Association of Governments (SANDAG), stipulate that any development project generating 2,400 or more average daily trips, or 200 or more peak hour trips, must be evaluated in accordance with the requirements of the Regional CMP. The CMP analysis must include the traffic level of service (LOS) impacts on affected freeways and Regionally Significant Arterial (RSA) systems, which includes all designated CMP roadways. In order to conform to the region’s CMP, local jurisdictions must adopt and implement a land use analysis program to assess impacts of land use decisions on the regional transportation system.

A review of the trip generation from **Table 3-1** compared to the CMP requirements is summarized below:

	Watermark	CMP Requirements
ADT	18,552	> 2,400
Peak Hour	1,726 (PM)	> 200

As shown, the proposed project is above the threshold for ADT's, and it is also above the threshold for peak hour trips, therefore, a CMP level of analysis is required.

4.6 FREEWAY SEGMENT AND RAMP METER LOS PROCEDURES

To determine the LOS of main lane freeway segments, Caltrans District 11 Procedures for Estimating Freeway Level of Service using a volume to capacity (v/c) procedure are used by the City of San Diego.

To determine the LOS of ramp meter locations, procedures are outlined in the City of San Diego, Traffic Impact Study Manual. These procedures determine potential change in delay and queue at ramp meters based on Caltrans most restrictive meter rates. These rates reflect a worst-case condition. Ramp meter delay greater than 15 minutes is considered unacceptable.

4.7 SIGNIFICANCE THRESHOLDS

As discussed above, two criteria must be met before project impacts are considered significant. First, an unacceptable LOS (i.e. E or F) must occur or degrade from D to E or F, and second, significance thresholds for project traffic must be exceeded. Alternatively, if project traffic causes a facility to degrade from an acceptable level of service to an unacceptable level of service, a significant impact would occur. The City has significance thresholds which are summarized in **Table 4-3**. These significance thresholds are from the City of San Diego, CEQA Significance Determination Thresholds. These thresholds are used in this analysis along with levels of service to determine if project impacts are considered significant.

TABLE 4-3

Significance Thresholds

Level of Service with Project *	Allowable Change Due To Project Impact **					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E (or ramp meter delays above 15 min.)	0.010	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	0.5	1.0	1.0

Note 1: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 minutes.

Note 2: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 minute.

* All LOS measurements are based upon Highway Capacity Manual procedures for peak-hour conditions. However, V/C ratios for roadway segments are estimated on an ADT/24-hour traffic volume basis (using Table 2 of the City’s Traffic Impact Study Manual. The acceptable LOS for freeways, roadways, and intersections is generally “D” (“C” for undeveloped locations). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

** If a proposed project’s traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. The project applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/and maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see above * note), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating the project’s direct significant and/or cumulatively considerable traffic impacts.

KEY: Delay = Average control delay per vehicle measured in seconds for intersections, or minutes for ramp meters
 LOS = Level of Service
 Speed = Speed measured in miles per hour
 V/C = Volume to Capacity ratio

Source: City of San Diego, CEQA Significance Determination Thresholds, January 2011

5.0 EXISTING CONDITIONS

Existing conditions were analyzed based on field visits and collection of current traffic data and traffic counts.

5.1 EXISTING ROADWAY FACILITIES

Scripps Poway Parkway – Scripps Poway Parkway connects I-15 in the West and SR-67 in the East. The road is classified as either a six lane Prime Arterial along the majority of its length. The road is functionally classified as a four lane Major Road east of Spring Canyon Road to Angelique Street. The road currently exists in its ultimate Community Plan Classification within the City of San Diego. The speed limit along Scripps Poway Parkway is 50 mph. There is a raised median and no parking along the entire road within the study area. Scripps Poway Parkway also contains bike lanes. The road is a major East-West route through Miramar Ranch North and provides access to I-15 for much of the Community. Scripps Poway Parkway is identified as a Regionally Significant Arterial in the Congestion Management Program and is subject to enhanced evaluation procedures.

Mercy Road – Mercy Road connects Black Mountain Road in the West to I-15 in the East. The road is classified as a four lane Major Road in the Mira Mesa Community Plan and serves as a continuation of Scripps Poway Parkway. The road has a speed limit of 45 mph within the study area. The road has no parking, a raised median and bike lanes. Mercy Road exists in its ultimate classification for the Mira Mesa Community Plan. The road connects Miramar Ranch North to Mira Mesa and Rancho Penasquitos via Black Mountain Road.

Black Mountain Road – Black Mountain Road is a major North-South roadway connecting Mira Mesa in the South to Rancho Penasquitos in the North. The road is functionally classified as a six lane Prime Arterial south of Mercy Road and a four lane Major Road North of that point. The speed limit for Black Mountain Road is 45 mph within the study area. The road has no parking, a raised median and bike lanes within the study area. North of Mercy Road the Rancho Penasquitos Community Plan calls for the road to be widened to an ultimate classification of six lane Prime Arterial. A limited portion of this widening is planned to be completed by the Casa Mira View project.

5.2 EXISTING TRAFFIC VOLUMES

Figure 5-1 shows the existing average weekday 24-hour traffic volumes for street segments in the project study area. Existing street segment functional classifications were used for purposes of this analysis. Traffic counts summarized on this figure were taken in October and November 2008. Freeway volumes are derived from Caltrans 2010 count data. **Appendix B** includes the existing count data for street segments and intersections. **Figure 5-2** shows the functional classification of roadways in the study area.

5.3 STREET SEGMENT ANALYSIS

As shown on **Table 5-1**, all study area street segments currently operate at acceptable levels of service with the exception of the following segment:

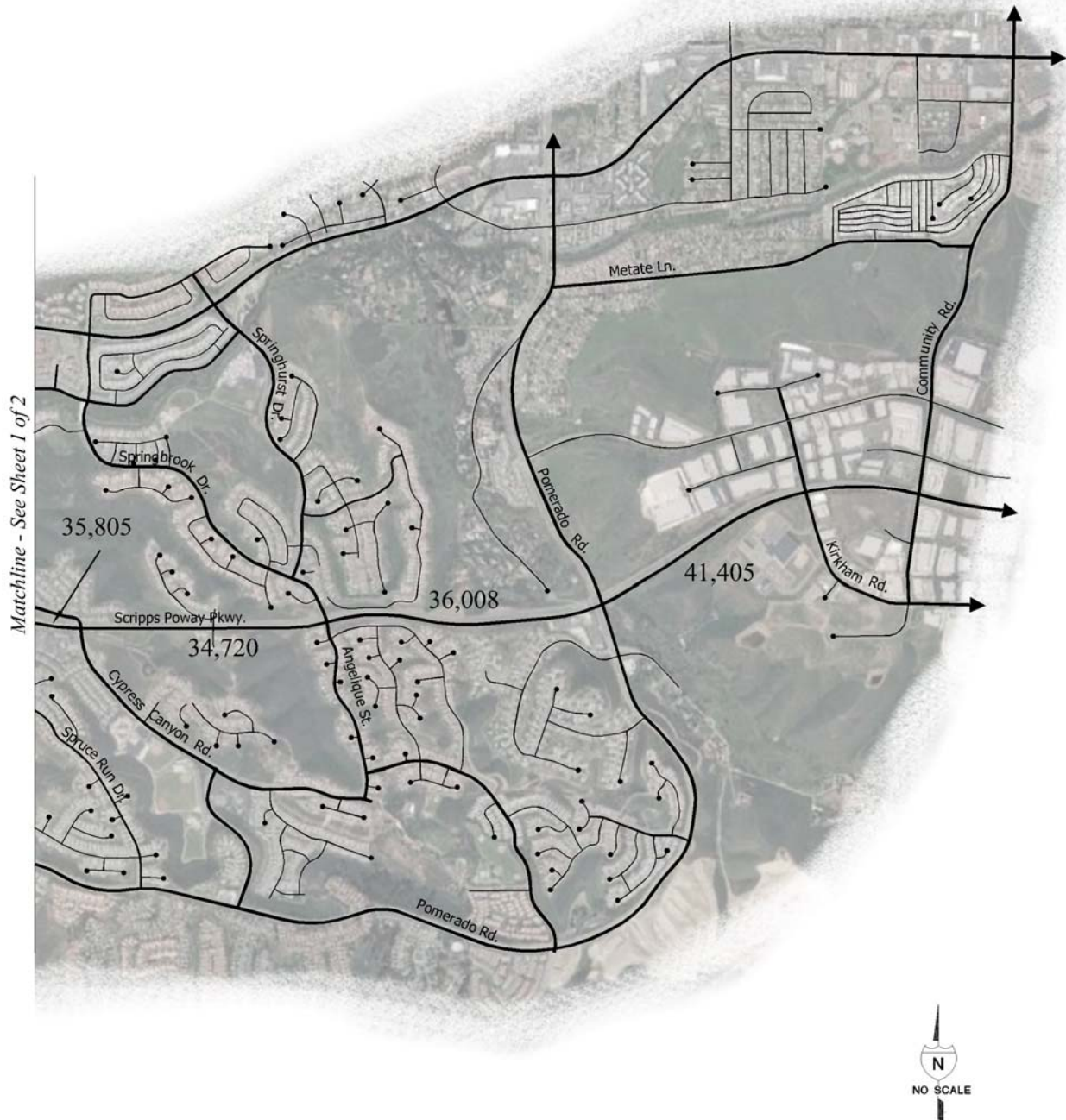
<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Scripps Poway Pkwy.	I-15/ Scripps Highland	E
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Dr.	E
Scripps Poway Pkwy.	Scripps Creek Dr./ Cypress Canyon Rd.	E



Matchline - See Sheet 2 of 2

Source: USAI
Date: 10-11/2008

FIGURE 5-1
Existing Average Daily Traffic



Source: USAI

Date: 10-11/2008

FIGURE 5-1
Existing Average Daily Traffic

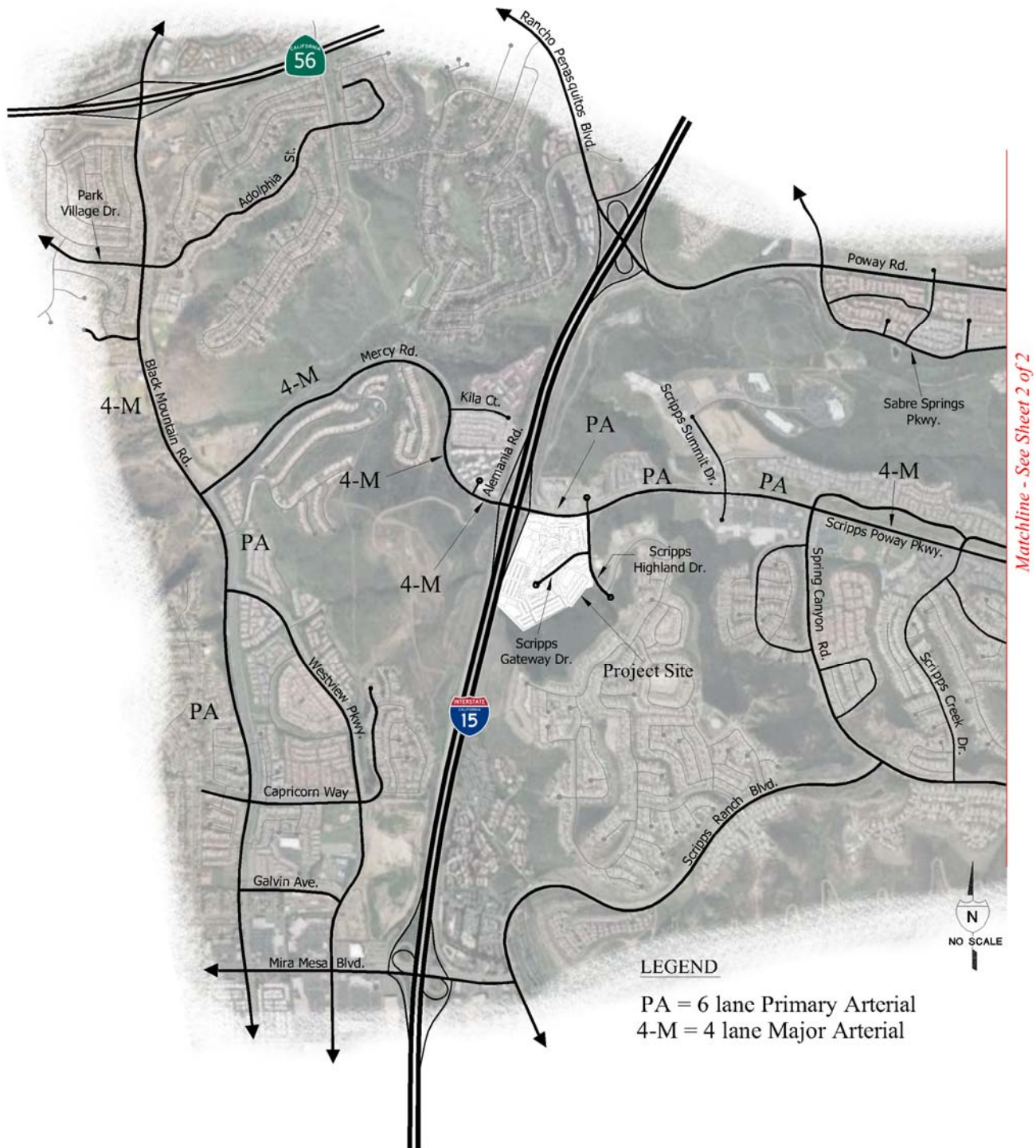


FIGURE 5-2
Functional Roadway Classification

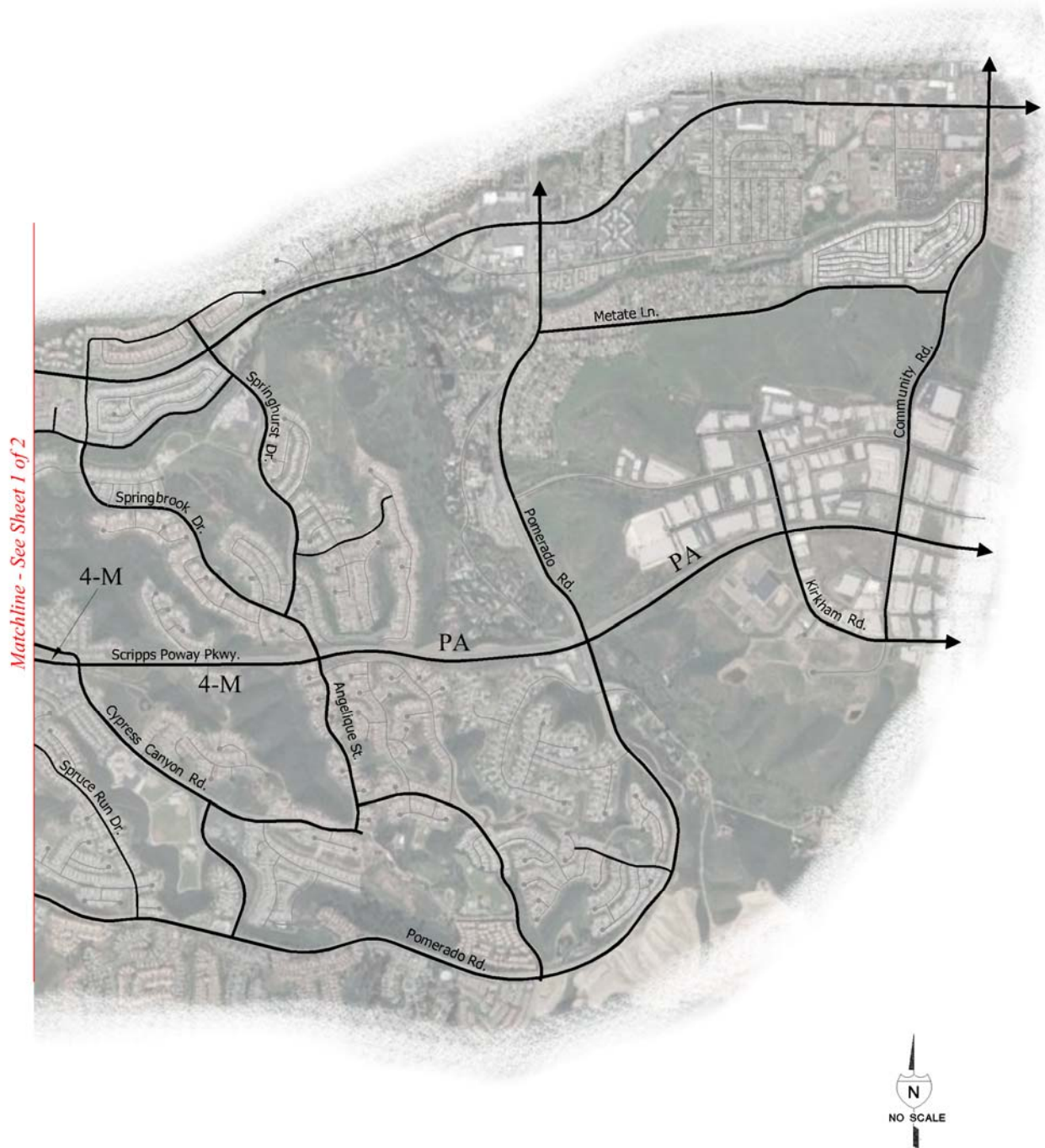


FIGURE 5-2
Functional Roadway Classification

TABLE 5-1
Existing Street Segment Levels of Service

Road	Segment	Jurisd.	# Lanes	Class.	Cap.	Volume	V/C	LOS
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	40,000	30,688	0.77	D
	Westview Pkwy./ Mercy Rd.	SD	6	PA	60,000	30,216	0.50	B
	Capricorn Way/ Westview Pkwy.	SD	6	PA	60,000	25,599	0.43	B
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	40,000	15,830	0.40	B
	Kika Ct./ Alemania Rd.	SD	4	4-M	40,000	17,719	0.44	B
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	40,000	21,056	0.53	C
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	60,000	57,613	0.96	E
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	60,000	49,688	0.83	C
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	60,000	41,832	0.70	C
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	40,000	38,992	0.97	E
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	40,000	35,805	0.90	E
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	40,000	34,720	0.87	D
	Angelique St./ Pomerado Rd.	Poway	6	PA	60,000	36,008	0.60	C
	Pomerado Rd./ Kirkham Rd.	Poway	6	PA	60,000	41,405	0.69	C

Legend:

Class. = Functional Class SD= San Diego
 Cap. = Capacity @ LOS "E"
 LOS = Level of Service
 PA = 6 lane Prime Arterial
 4-M = 4 Lane Major Arterial

Existing Arterial Analysis

Road	Segment	Jurisd.	Class.	Cap.	Volume	Direction	Speed (mph)		LOS	
							AM	PM	AM	PM
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	PA	60,000	57,613	Eastbound	15.8	17.3	E	D
						Westbound	22.8	22.2	C	C
	Scripps Highland Dr./ Scripps Summit Dr.	SD	PA	60,000	49,688	Eastbound	30.4	21.4	B	D
						Westbound	31.6	27.2	B	C
	Scripps Summit Dr./ Spring Canyon Rd.	SD	PA	60,000	41,832	Eastbound	18.9	17.0	D	D
						Westbound	15.2	17.4	E	D
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4-M	40,000	38,992	Eastbound	20.1	21.6	D	D
						Westbound	25.3	28.0	C	B
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4-M	40,000	35,805	Eastbound	24.3	24.0	C	C
						Westbound	23.7	24.8	C	C
	Cypress Canyon Rd./ Vail Ct.	SD	4-M	40,000	34,720	Eastbound	28.6	27.4	B	C
						Westbound	31.8	31.3	B	B
	Angelique St./ Pomerado Rd.	Poway	PA	60,000	36,008	Eastbound	28.4	26.4	B	C
						Westbound	26.2	22.5	C	C
Pomerado Rd./ Kirkham Rd.	Poway	PA	60,000	41,405	Eastbound	43.6	37.7	A	A	
					Westbound	36.9	34.7	A	B	

Legend:

Class. = Functional Class SD= San Diego
 Cap. = Capacity @ LOS "E"
 LOS = Level of Service
 PA = 6 lane Prime Arterial
 4-M = 4 Lane Major Arterial

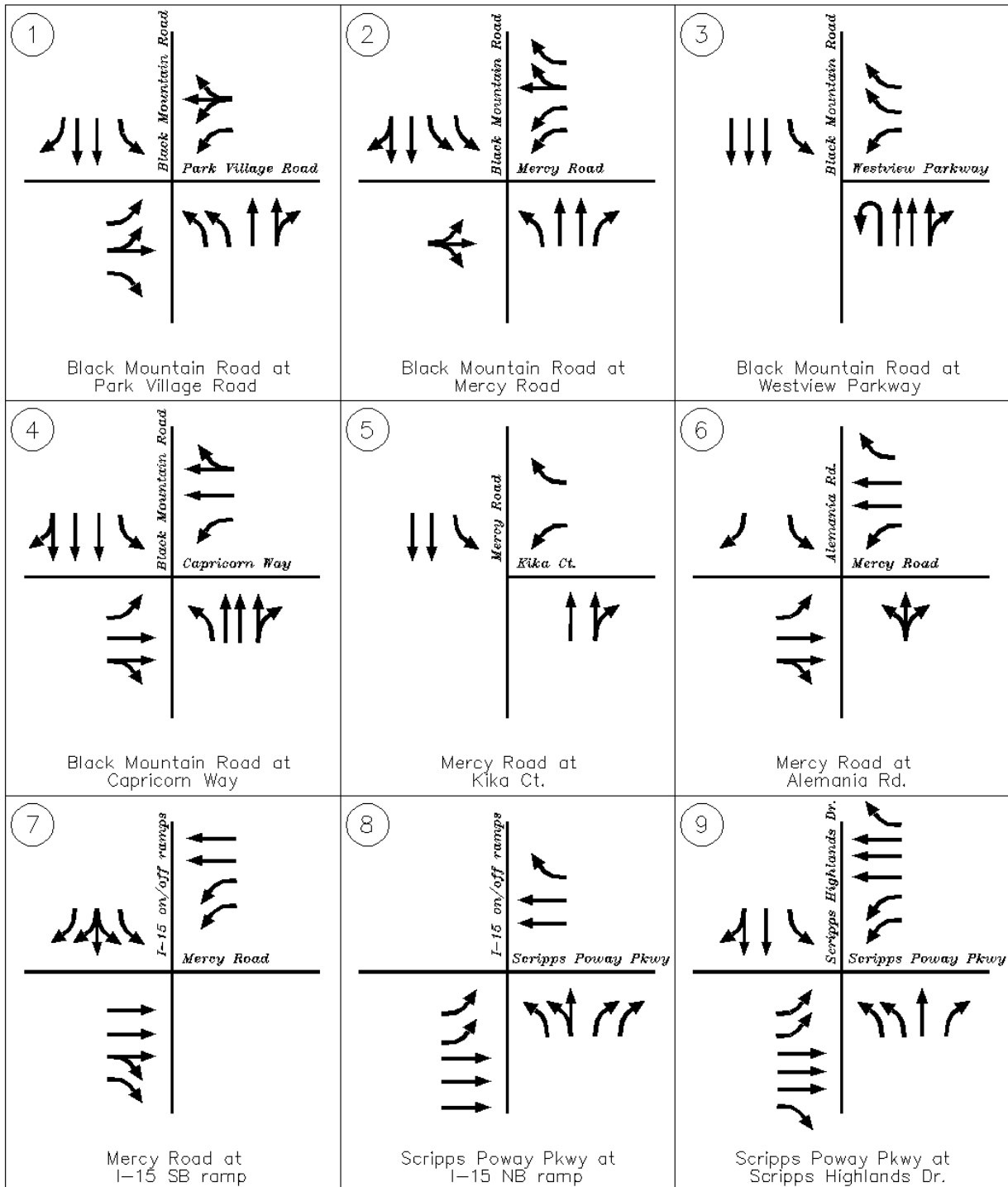


FIGURE 5-3

Existing Lane Configurations

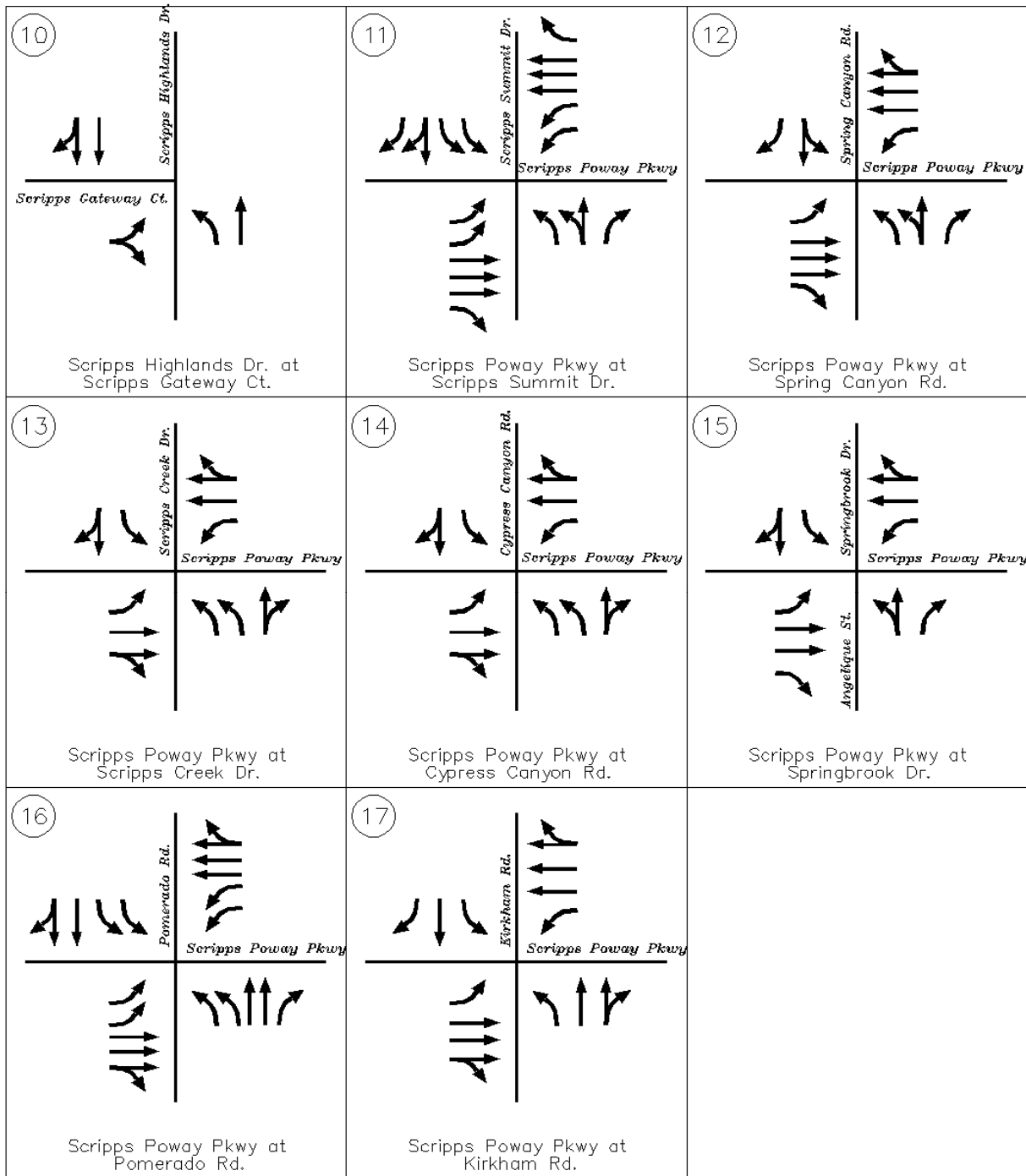


FIGURE 5-3

Existing Lane Configurations

5.4 EXISTING INTERSECTIONS

Figure 5-3 shows the existing lane configurations for the study intersections.

5.5 EXISTING INTERSECTION PEAK HOUR VOLUMES AND LOS

Figure 5-4 shows the existing AM and PM peak hour intersection traffic data which was collected at the intersections. As required by the City of San Diego, the analysis of peak hour intersection performance was based on the 2000 Highway Capacity Manual (HCM) using operational analysis procedures. A computer program which is based on these procedures (Synchro) was used to complete the analysis.

As shown on **Table 5-2**, all intersections currently operate at a level of service “D” or better during the AM and PM peak hour periods. Intersections are in the City of San Diego unless otherwise noted. LOS calculation worksheets for existing conditions may be found in **Appendix C**.

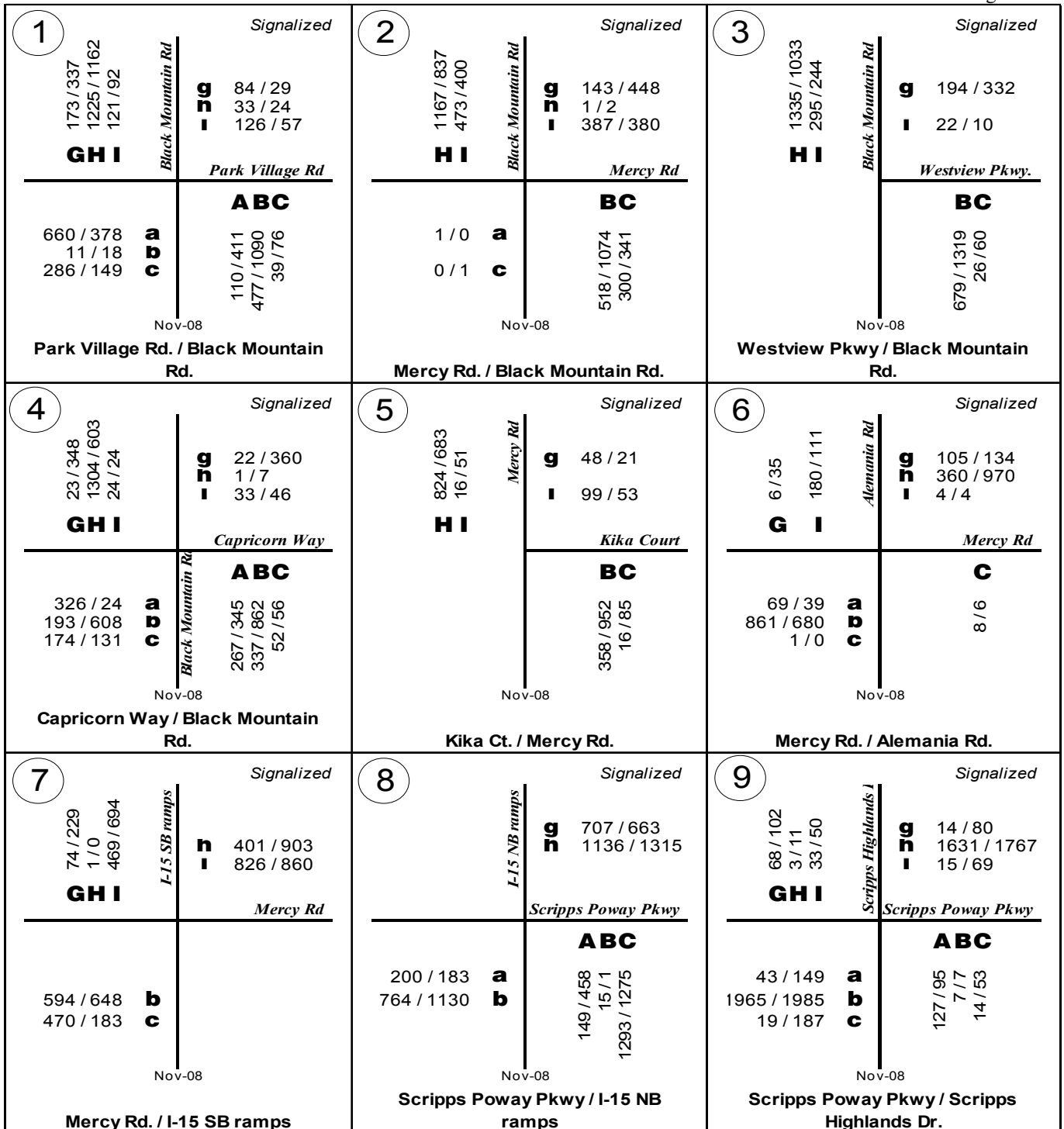


FIGURE 5-4

Existing AM / PM Peak Hour Traffic

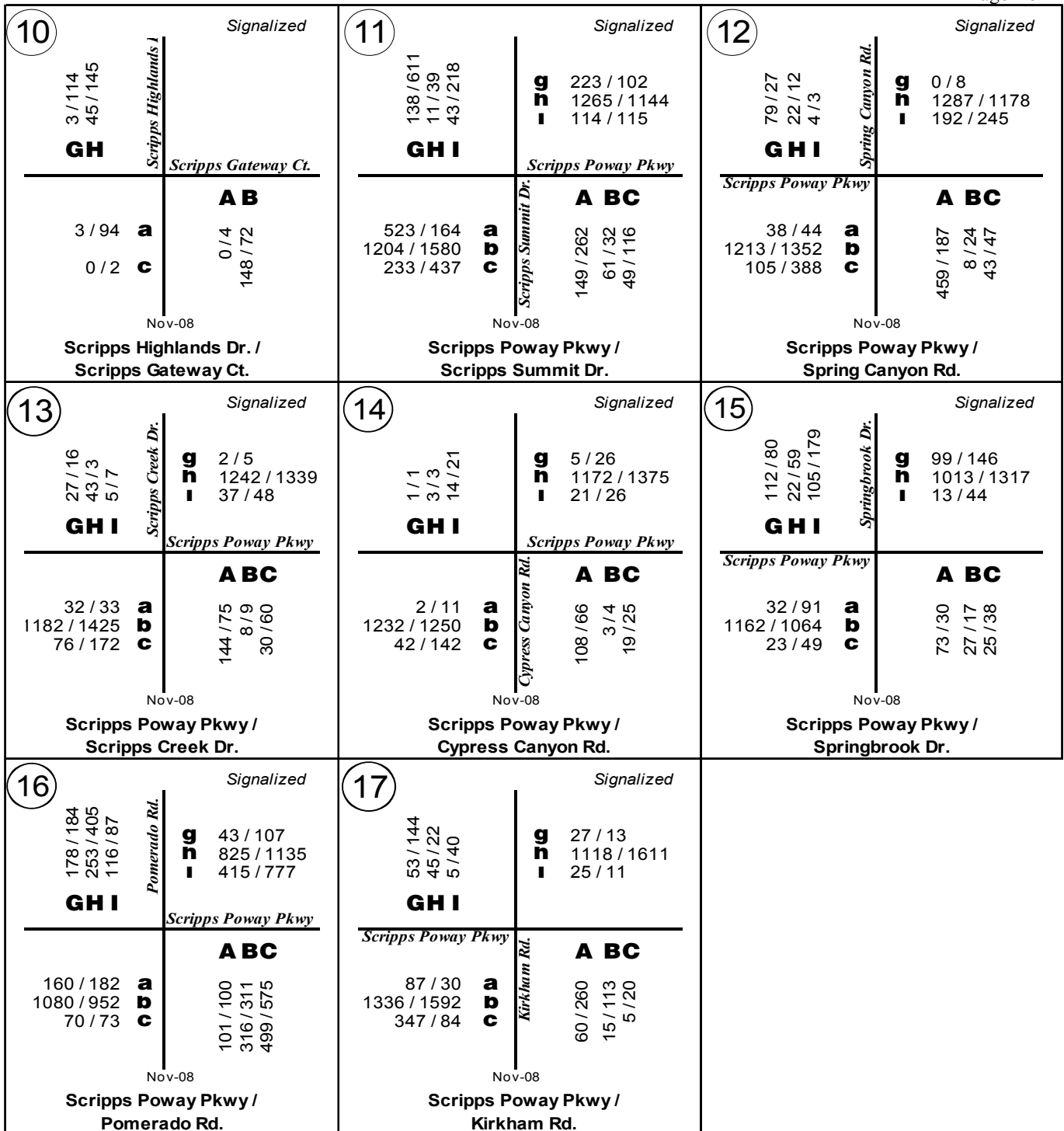


FIGURE 5-4

Existing AM / PM Peak Hour Traffic

TABLE 5-2
Existing Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Park Village Rd. / Black Mountain Rd.	Signalized	39.0	D	42.9	D
2	Mercy Rd. / Black Mountain Rd.	Signalized	31.6	C	32.5	C
3	Westview Pkwy / Black Mountain Rd.	Signalized	16.7	B	17.5	B
4	Capricorn Way / Black Mountain Rd.	Signalized	41.0	D	39.5	D
5	Kika Ct. / Mercy Rd.	Signalized	6.0	A	6.2	A
6	Mercy Rd. / Alemania Rd.	Signalized	15.6	B	10.7	B
7	Mercy Rd. / I-15 SB ramps	Signalized	34.2	C	32.6	C
8	Scripps Poway Pkwy / I-15 NB ramps	Signalized	10.1	B	22.7	C
9	Scripps Poway Pkwy / Scripps Highlands Dr.	Signalized	19.8	B	21.0	C
10	Scripps Highlands Dr. / Scripps Gateway Ct.	Signalized	14.3	B	7.2	A
11	Scripps Poway Pkwy / Scripps Summit Dr.	Signalized	27.4	C	32.1	C
12	Scripps Poway Pkwy / Spring Canyon Rd.	Signalized	26.5	C	29.9	C
13	Scripps Poway Pkwy / Scripps Creek Dr.	Signalized	26.8	C	23.1	C
14	Scripps Poway Pkwy / Cypress Canyon Rd.	Signalized	11.8	B	12.6	B
15	Scripps Poway Pkwy / Springbrook Dr.	Signalized	22.0	C	32.2	C
16	Scripps Poway Pkwy / Pomerado Rd.(City of Poway)	Signalized	29.4	C	35.7	D
17	Scripps Poway Pkwy / Kirkham Rd.(City of Poway)	Signalized	12.4	B	24.5	C

Notes:

LOS = Level of Service

6.0 EXISTING WITH PROJECT

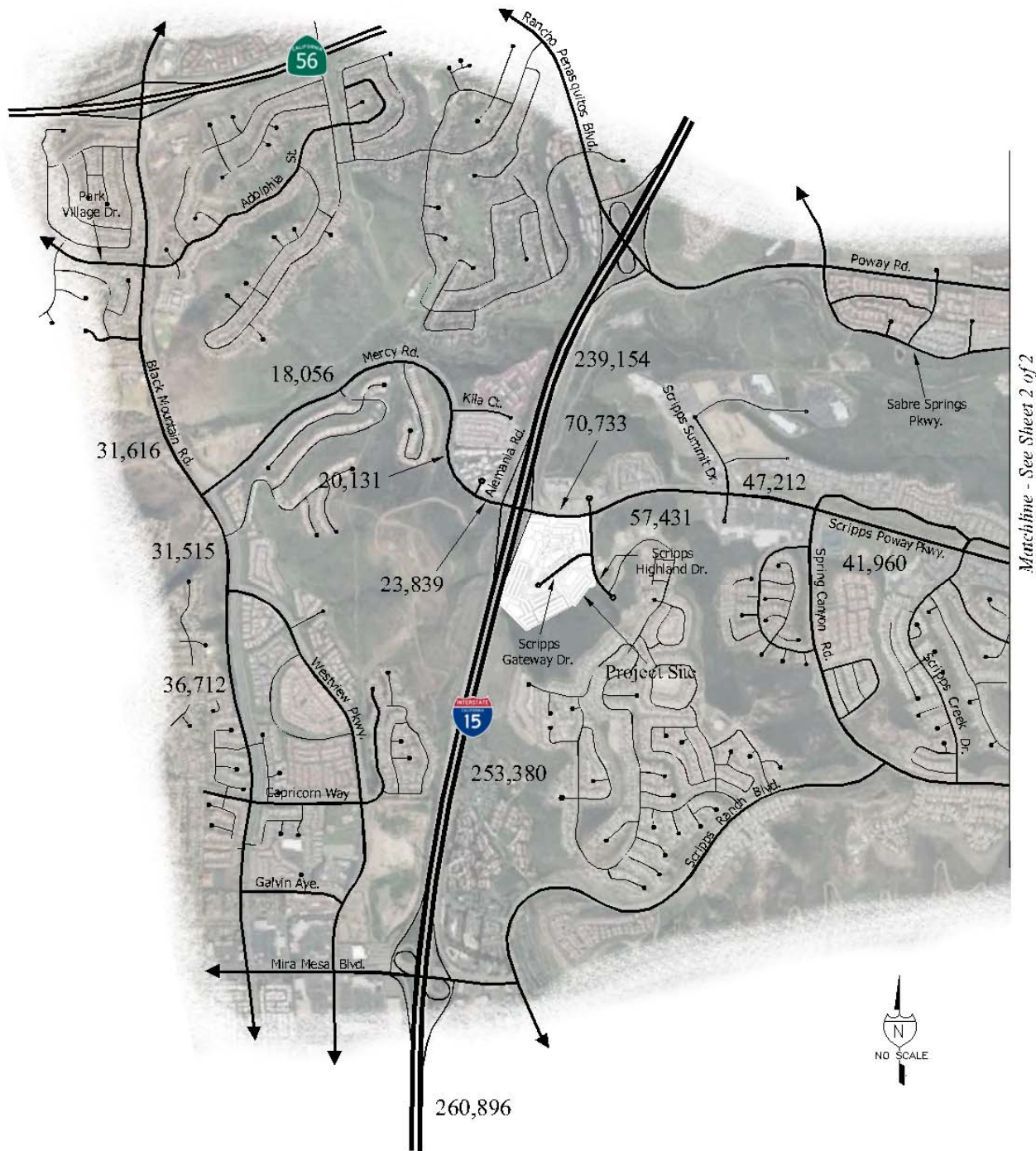
The purpose of this chapter is to evaluate the impacts of the Existing With Project analysis. This analysis evaluates the project's "direct impacts" by comparing existing conditions without the project to existing conditions with the project.

6.1 STREET SEGMENTS

Street segment levels of service with project traffic were determined by combining the existing daily volumes with the project only daily volumes. **Figure 6-1** shows the Existing With Project average daily traffic volumes. **Table 6-1** shows street segment levels of service with the addition of the Watermark project traffic. An arterial analysis was evaluated on Scripps Poway Parkway in **Table 6-1** and shows five (5) segments operating at unacceptable levels of service.

6.2 INTERSECTIONS

Project traffic for the AM and PM peaks were added to existing traffic as shown in **Figure 6-2**. Intersection delays and levels of service for the Existing With Project peak hour traffic is provided in **Table 6-2**. As shown, only no intersections are projected to operate at an unacceptable level of service.



Matchline - See Sheet 2 of 2

FIGURE 6-1
Existing With Project Average Daily Traffic

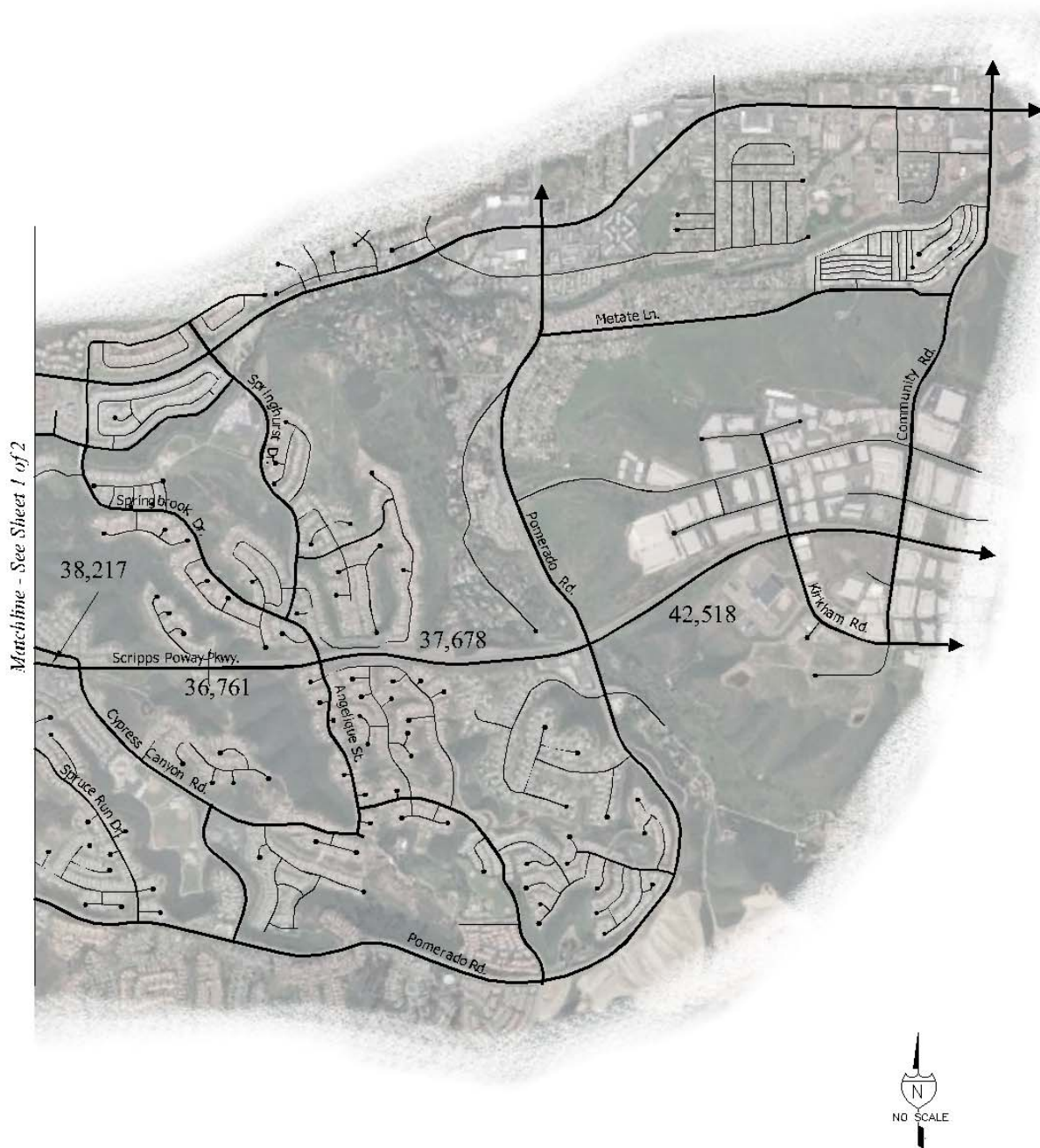


FIGURE 6-1

Existing With Project Average Daily Traffic

TABLE 6-1

Existing With Project Street Segment Levels of Service

Road	Segment	Jurisd.	# Lanes	Class.	Cap.	Volume	V/C	LOS
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	40,000	31,616	0.79	D
	Westview Pkwy./Mercy Rd.	SD	6	PA	60,000	31,515	0.53	B
	Capricorn Way/Westview Pkwy.	SD	6	PA	60,000	26,712	0.45	B
Mercy Road	Black Mountain Rd./Kika Ct.	SD	4	4-M	40,000	18,056	0.45	B
	Kika Ct./Alemania Rd.	SD	4	4-M	40,000	20,131	0.50	B
	Alemania Rd./I-15 SB Ramps	SD	4	4-M	40,000	23,839	0.60	C
Scripps Poway Parkway	I-15 NB Ramps/Scripps Highland Dr.	SD	6	PA	60,000	70,733	1.18	F
	Scripps Highland Dr./Scripps Summit Dr.	SD	6	PA	60,000	57,431	0.96	E
	Scripps Summit Dr./Spring Canyon Rd.	SD	6	PA	60,000	47,212	0.79	C
	Spring Canyon Rd./Scripps Creek Dr.	SD	4	4-M	40,000	41,960	1.05	F
	Scripps Creek Dr./Cypress Canyon Rd.	SD	4	4-M	40,000	38,217	0.96	E
	Cypress Canyon Rd./Angelique St.	SD	4	4-M	40,000	36,761	0.92	E
	Angelique St./Pomerado Rd.	Poway	6	PA	60,000	37,678	0.63	C
	Pomerado Rd./Kirkham Rd.	Poway	6	PA	60,000	42,518	0.71	C

Legend:

Class. = Functional Class SD= San Diego
 Cap. = Capacity @ LOS "E"
 LOS = Level of Service
 PA = 6 lane Prime Arterial
 4-M = 4 Lane Major Arterial

Existing With Project Arterial Analysis

Road	Segment	Jurisd.	Class.	Cap.	Volume	Direction	Speed (mph)		LOS	
							AM	PM	AM	PM
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	PA	60,000	70,733	Eastbound	14.5	9.2	E	F
						Westbound	22.7	10.6	C	F
	Scripps Highland Dr./ Scripps Summit Dr.	SD	PA	60,000	57,431	Eastbound	30.0	13.7	B	E
						Westbound	30.6	25.0	B	C
	Scripps Summit Dr./ Spring Canyon Rd.	SD	PA	60,000	47,212	Eastbound	13.7	12.7	E	F
						Westbound	12.8	15.0	F	E
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4-M	40,000	41,960	Eastbound	20.0	19.8	D	D
						Westbound	23.8	24.6	C	C
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4-M	40,000	38,217	Eastbound	24.2	23.1	C	C
						Westbound	23.3	23.7	C	C
	Cypress Canyon Rd./ Vail Ct.	SD	4-M	40,000	36,761	Eastbound	28.6	27.2	B	C
						Westbound	31.7	30.8	B	B
	Angelique St./ Pomerado Rd.	Poway	PA	60,000	37,678	Eastbound	28.4	26.2	B	C
						Westbound	26.0	20.1	C	D
Pomerado Rd./ Kirkham Rd.	Poway	PA	60,000	42,518	Eastbound	43.0	37.3	A	A	
					Westbound	36.6	34.4	A	B	

Legend:

Class. = Functional Class SD= San Diego
 Cap. = Capacity @ LOS "E"
 LOS = Level of Service
 PA = 6 lane Prime Arterial
 4-M = 4 Lane Major Arterial

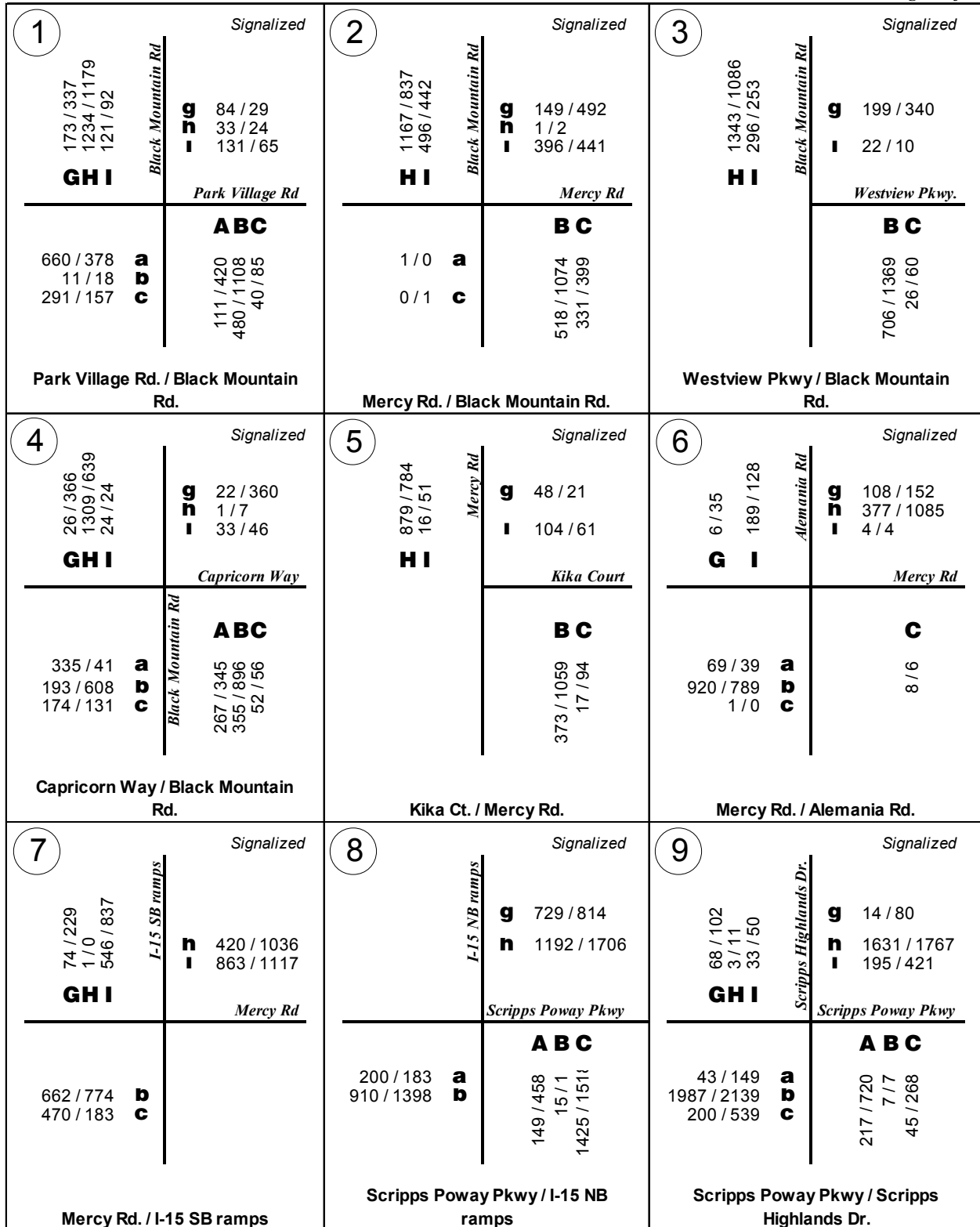


FIGURE 6-2

Existing With Project AM/PM Peak Hour Traffic

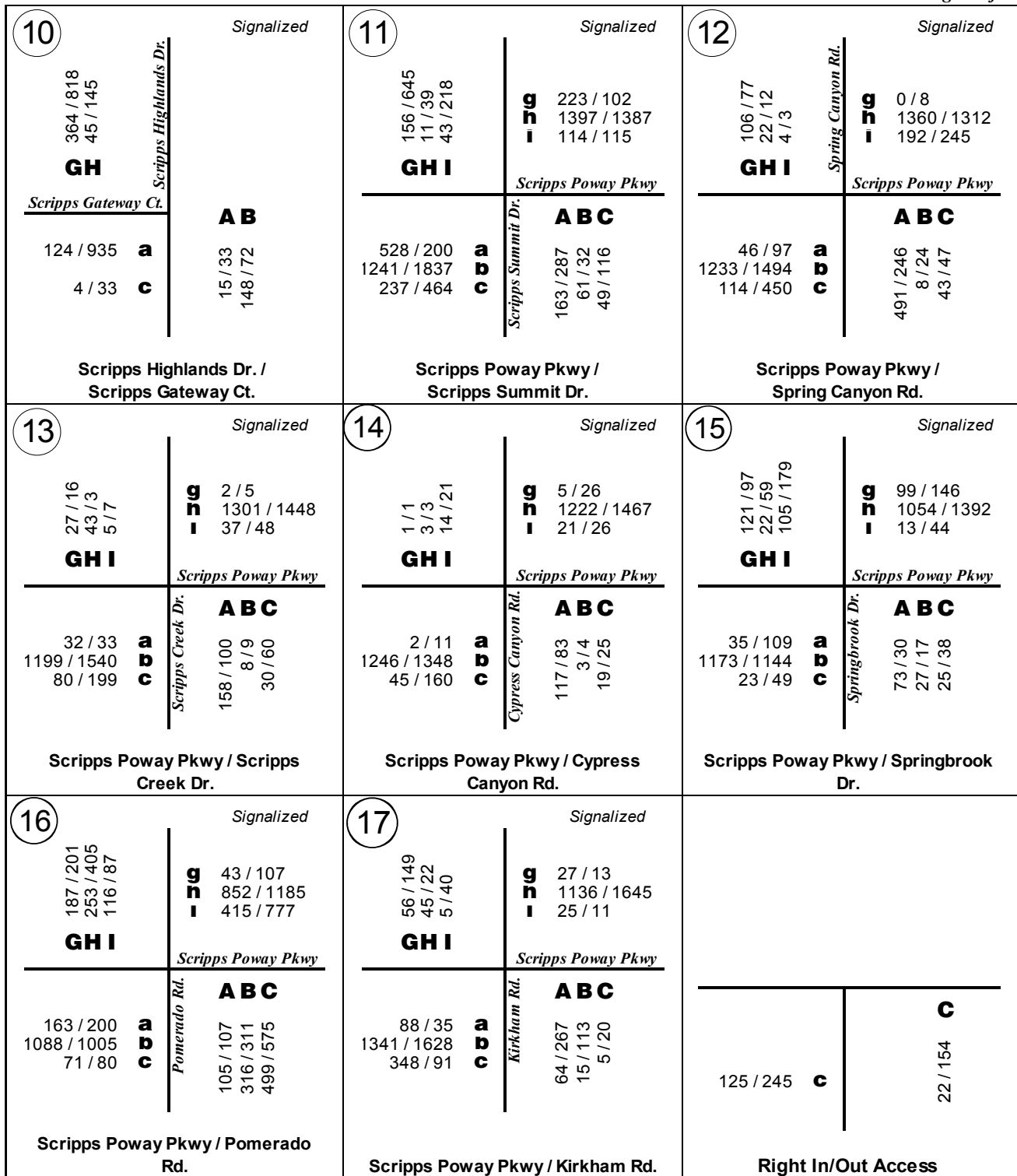


FIGURE 6-2

Existing With Project AM/PM Peak Hour Traffic

TABLE 6-2
Existing With Project Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Park Village Rd. / Black Mountain Rd.	Signalized	51.4	D	44	D
2	Mercy Rd. / Black Mountain Rd.	Signalized	33.6	C	34.6	C
3	Westview Pkwy / Black Mountain Rd.	Signalized	16.8	B	17.8	B
4	Capricorn Way / Black Mountain Rd.	Signalized	42.2	D	39.5	D
5	Kika Ct. / Mercy Rd.	Signalized	6	A	6.4	A
6	Mercy Rd. / Alemania Rd.	Signalized	15.6	B	12.9	B
7	Mercy Rd. / I-15 SB ramps	Signalized	34.4	C	53.1	D
8	Scripps Poway Pkwy / I-15 NB ramps	Signalized	10.2	B	27.2	C
9	Scripps Poway Pkwy / Scripps Highlands Dr.	Signalized	24.1	C	54.8	D
10	Scripps Highlands Dr. / Scripps Gateway Ct.	Signalized	6.9	A	17	B
11	Scripps Poway Pkwy / Scripps Summit Dr.	Signalized	32.3	C	48.2	D
12	Scripps Poway Pkwy / Spring Canyon Rd.	Signalized	35	C	47.9	D
13	Scripps Poway Pkwy / Scripps Creek Dr.	Signalized	27.2	C	28.3	C
14	Scripps Poway Pkwy / Cypress Canyon Rd.	Signalized	12.1	B	14	B
15	Scripps Poway Pkwy / Springbrook Dr.	Signalized	22.3	C	40.7	D
16	Scripps Poway Pkwy / Pomerado Rd.	Signalized	29.4	C	37.1	D
17	Scripps Poway Pkwy / Kirkham Rd.	Signalized	13.8	B	25.3	C

Notes:

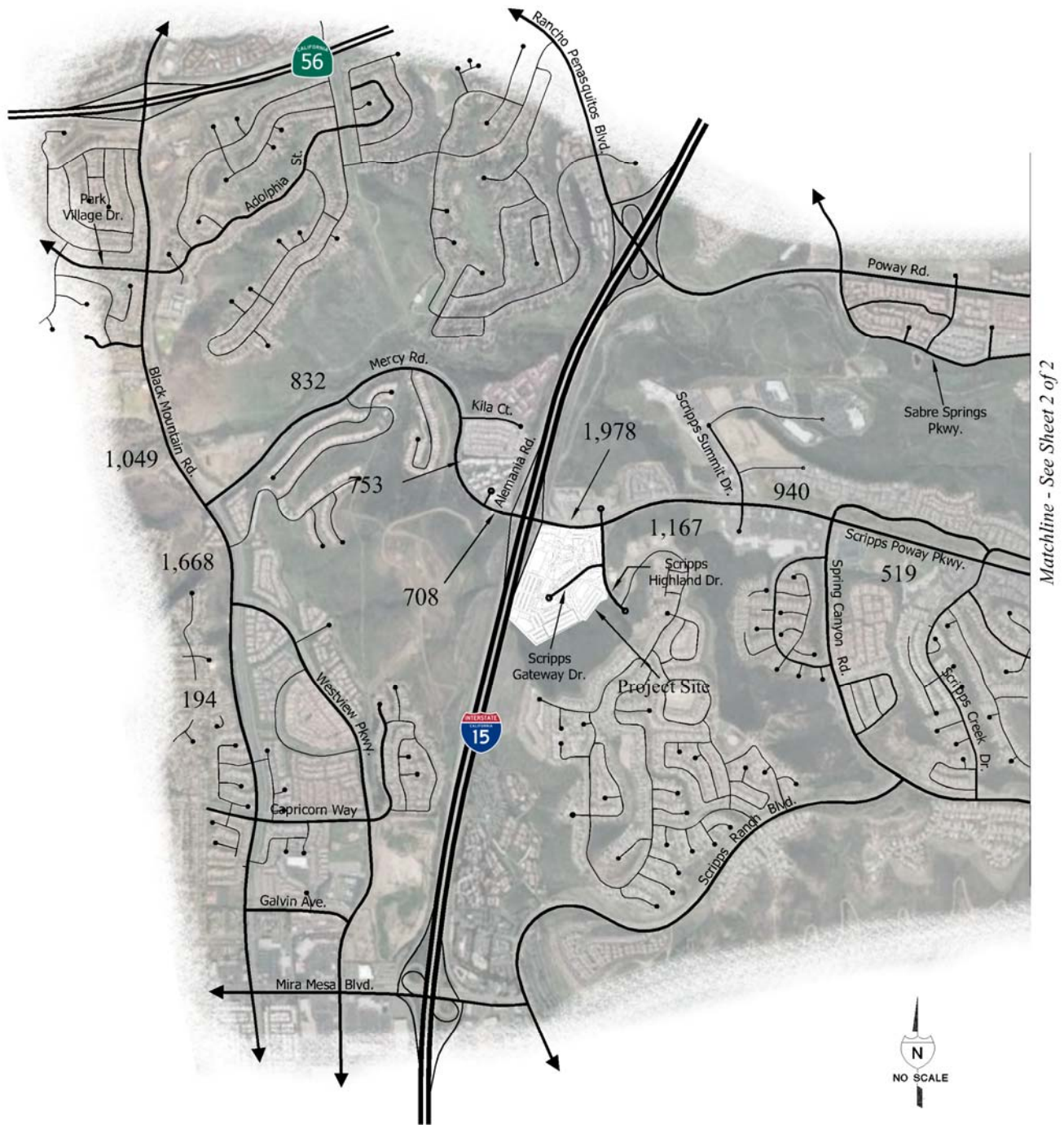
LOS = Level of Service

7.0 OTHER PROJECTS

To find the Near Term (Existing + Other Projects) traffic volumes, USAI contacted City staff to determine other proposed or approved projects that have impacts within the project study area. From that contact, USAI found there are several other projects that may have impacts within the project study area. Only three other projects were found to have impacts within the project study area. Each of these other projects has been approved by the City of San Diego. Trip distribution, trip generation, and project only data for the cumulative projects can be found in **Appendix E**.

Project only volumes from the three cumulative projects were extracted from other traffic studies and added to existing traffic volumes to get Near Term “other project” volumes. **Figure 7-1** shows the Other Projects average daily traffic volumes. **Figure 7-2** shows the Other Projects AM/PM peak hour traffic volumes. The three other projects used in this analysis are listed below:

Med-Impact – The Med-Impact project is composed of two large Corporate Headquarters (single-tenant) office buildings totaling 324,274 square feet located adjacent to the project site and sharing access through Scripps Gateway Court and other project roadways. It is expected that Med-Impact will be a large user of the hotel planned for the Watermark project. Further, due to the adjacent location and the planned connections with the Watermark project, it is expected that the Med-Impact project will serve to increase the mixed-use nature of the project and contribute to the internalization of project traffic. The Med-Impact project is anticipated to generate 3,243 ADT when fully occupied. Med-Impact building one was under construction at the time of the existing counts used in this study.



Matchline - See Sheet 2 of 2

FIGURE 7-1
Other Projects Average Daily Traffic Volumes



FIGURE 7-1

Other Projects Average Daily Traffic Volumes

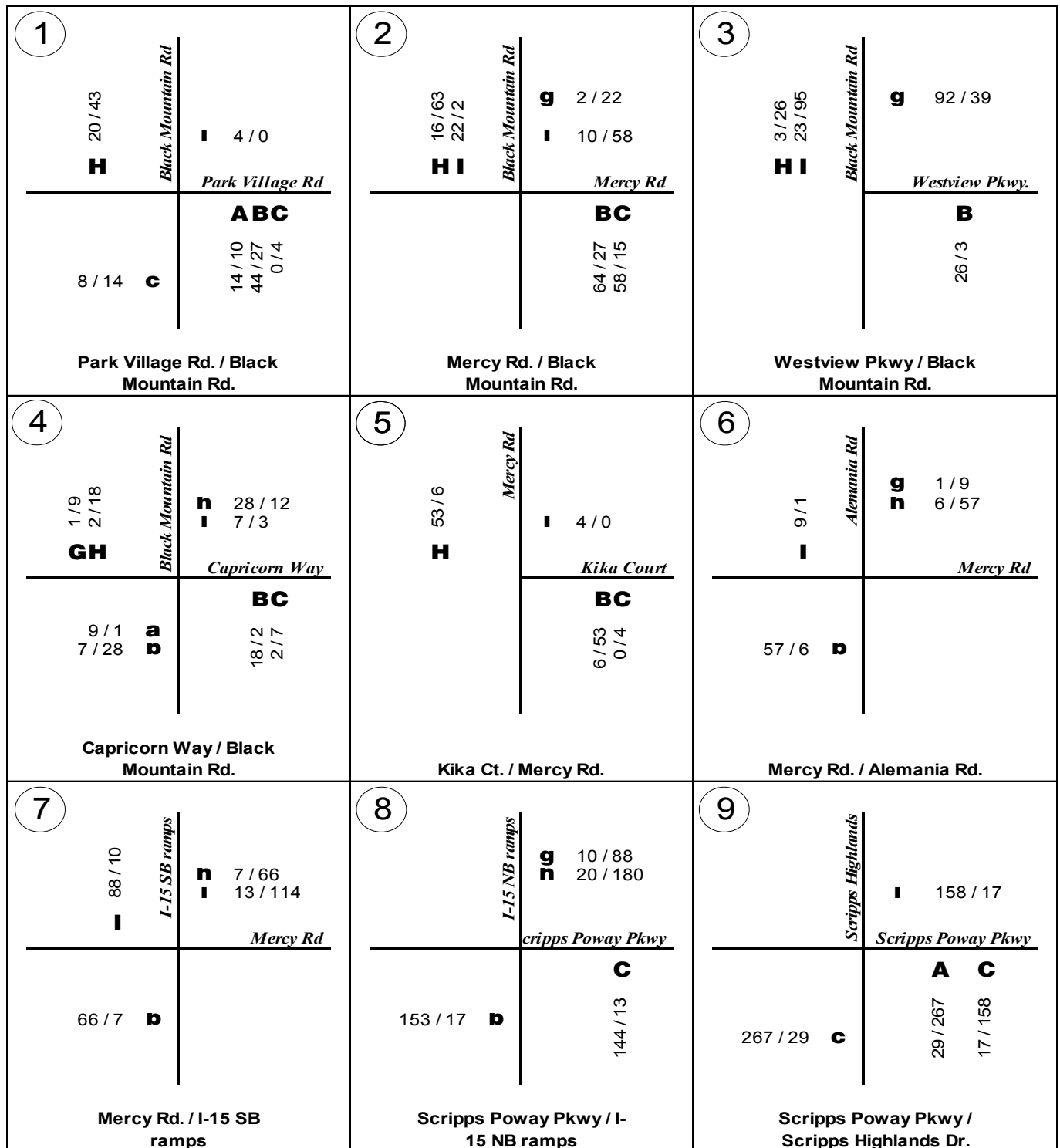


FIGURE 7-2

Other Projects AM/PM Peak Hour Traffic Volumes

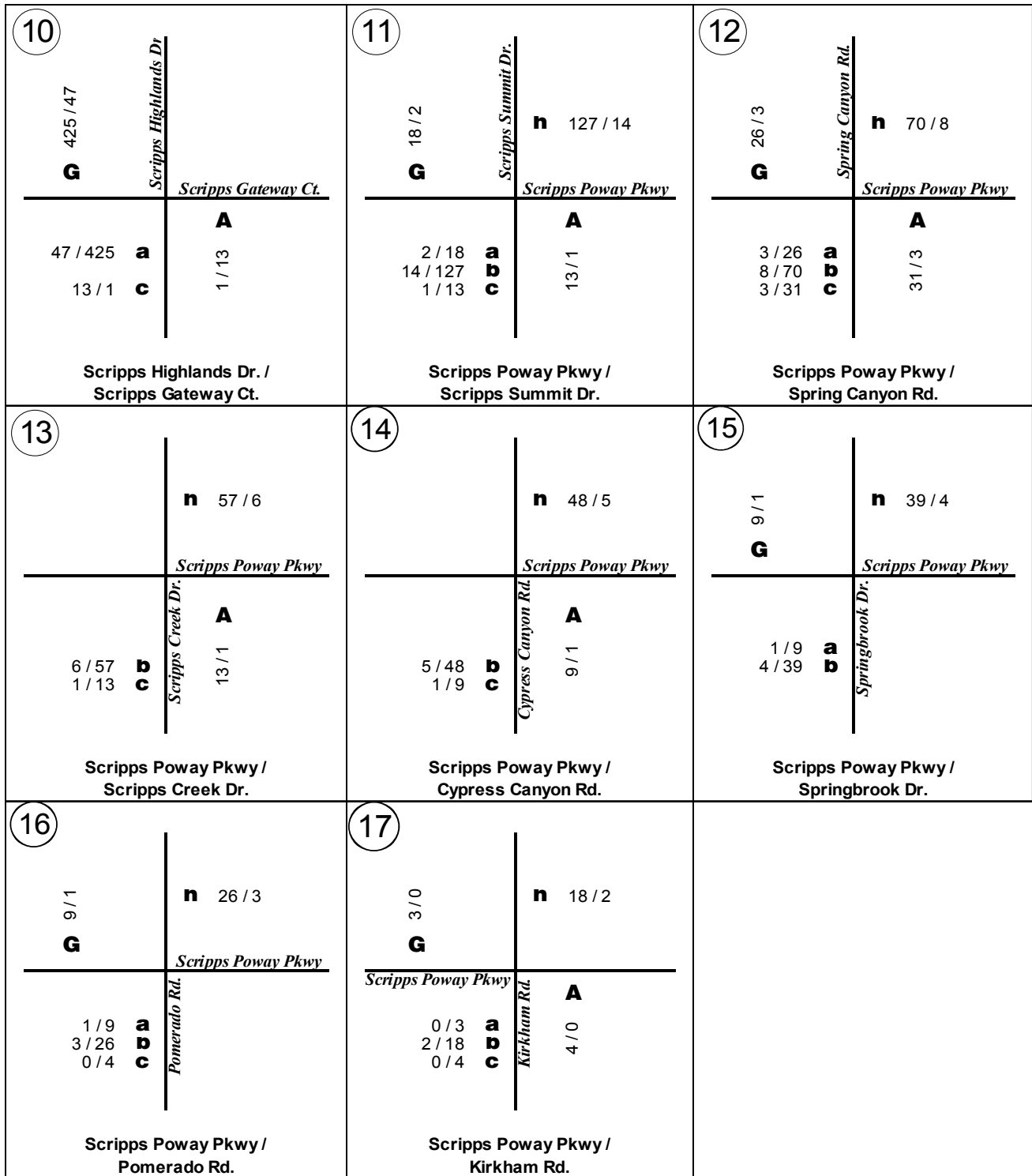


FIGURE 7-2

Other Projects AM/PM Peak Hour Traffic Volumes

Sharp Health – The Sharp Health project (45,000 square feet) is composed of medical office uses located North of Scripps Poway Parkway at Scripps Summit Drive. The Sharp Health project is anticipated to generate 900 ADT when fully occupied.

Casa Mira View – Casa Mira View is a large multi-family residential project located on Westview Parkway North of Mira Mesa Boulevard and adjacent to I-15. The project consists of 1,848 residential dwelling units expected to generate 11,088 ADT. It is anticipated that the Casa Mira View project will have limited impacts on study area intersections and segments focused on Black Mountain and Mercy Road. Casa Mira View is currently under construction. It is anticipated that the project will construct approximately 200 du/year over the next several years.

8.0 NEAR TERM WITHOUT PROJECT

In order to determine Near Term traffic, USAI followed the methodology outlined in the City of San Diego Traffic Impact Study Manual. An examination of the immediate area surrounding the Watermark project including a couple of projects that have gained approval in the area were evaluated as shown in the previous section of this report. The project only traffic for these projects was added to the existing traffic to reflect an “existing plus other project” or Near Term scenario. No road or freeway improvements are assumed in the Near Term scenarios.

8.1.1 STREET SEGMENTS

Figure 8-1 shows average daily traffic volumes from the “other projects” added to existing average daily traffic volumes.

Table 8-1 shows street segment levels of service and significant impact measure without project traffic. The following four (4) street segments are projected to operate at an unacceptable level of service in the Near Term condition without the project and without mitigation:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Scripps Poway Pkwy.	I-15/ Scripps Highland	E
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Dr.	E
Scripps Poway Pkwy.	Scripps Creek Dr./ Cypress Canyon Rd.	E
Scripps Poway Pkwy.	Cypress Canyon Rd./ Angelique Street	E

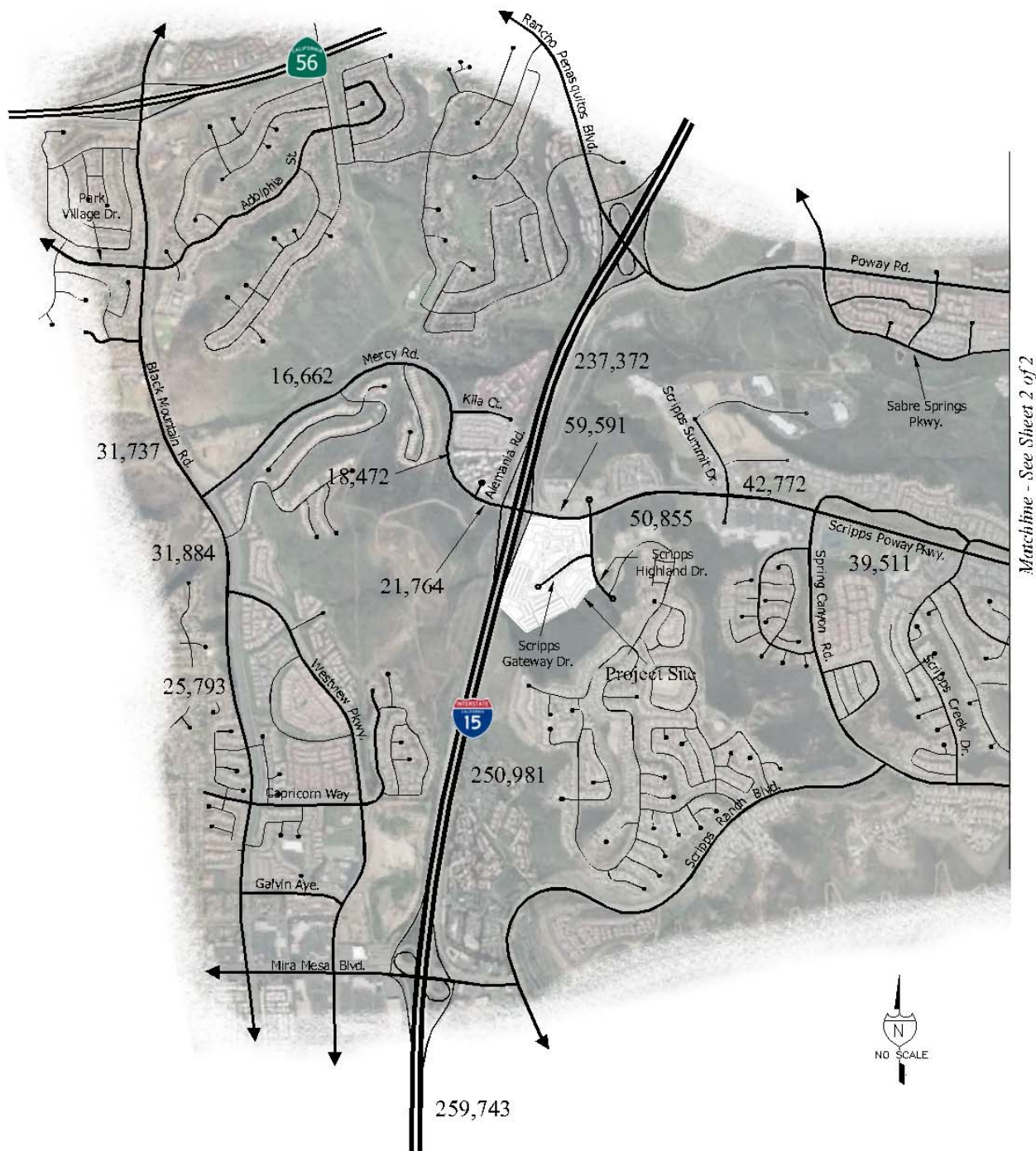


FIGURE 8-1
Near Term Without Project Average Daily Traffic

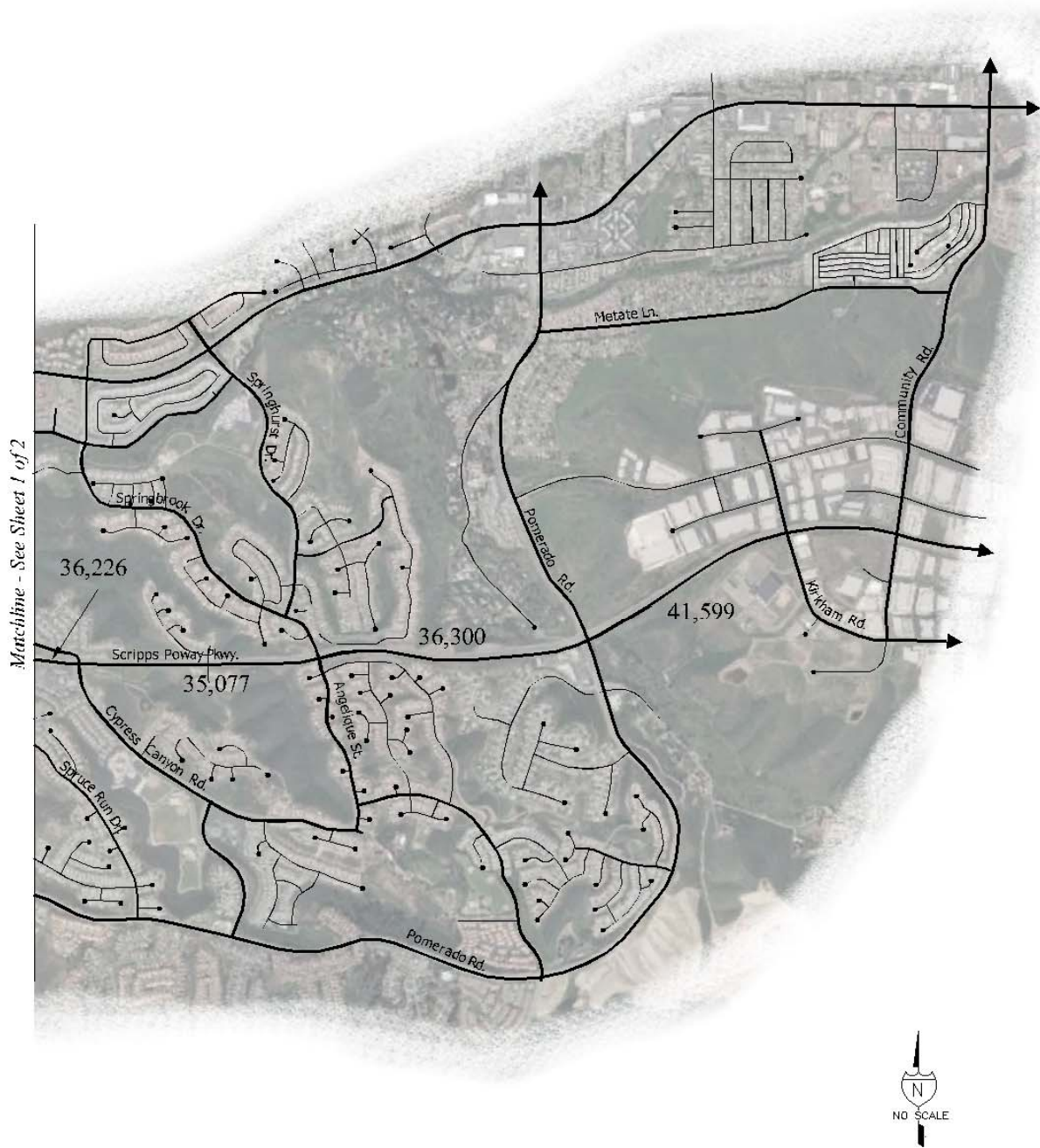


FIGURE 8-1
Near Term Without Project Average Daily Traffic

TABLE 8-1
Near Term Without Project Street Segment Levels of Service

Road	Segment	Jurisd.	# Lanes	Class.	Cap.	Volume	V/C	LOS
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	40,000	31,737	0.79	D
	Westview Pkwy./ Mercy Rd.	SD	6	PA	60,000	31,884	0.53	B
	Capricorn Way/ Westview Pkwy.	SD	6	PA	60,000	25,793	0.43	B
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	40,000	16,662	0.42	B
	Kika Ct./ Alemania Rd.	SD	4	4-M	40,000	18,472	0.46	B
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	40,000	21,764	0.54	C
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	60,000	59,591	0.99	E
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	60,000	50,855	0.85	D
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	60,000	42,772	0.71	C
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	40,000	39,511	0.99	E
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	40,000	36,226	0.91	E
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	40,000	35,077	0.88	E
	Angelique St./ Pomerado Rd.	Poway	6	PA	60,000	36,300	0.61	C
	Pomerado Rd./ Kirkham Rd.	Poway	6	PA	60,000	41,599	0.69	C

Legend:

Class. = Functional Class SD= San Diego
 Cap. = Capacity @ LOS "E"
 LOS = Level of Service
 PA = 6 lane Prime Arterial
 4-M = 4 Lane Major Arterial

Near Term Without Project Arterial Analysis

Road	Segment	Jurisd.	Class.	Cap.	Volume	Direction	Speed (mph)		LOS	
							AM	PM	AM	PM
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	PA	60,000	59,591	Eastbound	15.8	15.6	E	E
						Westbound	22.8	16.8	C	E
	Scripps Highland Dr./ Scripps Summit Dr.	SD	PA	60,000	50,855	Eastbound	30.2	20.3	B	D
						Westbound	31.6	27.4	B	C
	Scripps Summit Dr./ Spring Canyon Rd.	SD	PA	60,000	42,772	Eastbound	18.8	14.5	D	E
						Westbound	13.6	18.0	E	D
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4-M	40,000	39,511	Eastbound	20.1	21.0	D	D
						Westbound	24.4	26.6	C	C
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4-M	40,000	36,226	Eastbound	24.3	23.7	C	C
						Westbound	23.3	24.8	C	C
	Cypress Canyon Rd./ Vail Ct.	SD	4-M	40,000	35,077	Eastbound	28.4	27.3	B	C
						Westbound	31.7	31.3	B	B
	Angelique St./ Pomerado Rd.	Poway	PA	60,000	36,300	Eastbound	28.4	25.1	B	C
						Westbound	25.8	22.2	C	C
Pomerado Rd./ Kirkham Rd.	Poway	PA	60,000	41,599	Eastbound	43.2	37.7	A	A	
					Westbound	36.4	33.3	A	B	

Legend:

Class. = Functional Class SD= San Diego
 Cap. = Capacity @ LOS "E"
 LOS = Level of Service
 PA = 6 lane Prime Arterial
 4-M = 4 Lane Major Arterial

8.2 INTERSECTIONS

Figure 8-2 shows the peak hour traffic volumes from the “other projects” when added to existing peak hour volumes at the study area intersections. **Table 8-2** shows the resulting AM and PM peak hour levels of service. As shown in **Table 8-2**, no intersections are expected to operate at an unacceptable level of service.

Appendix F includes the Near Term without Project Synchro worksheets.

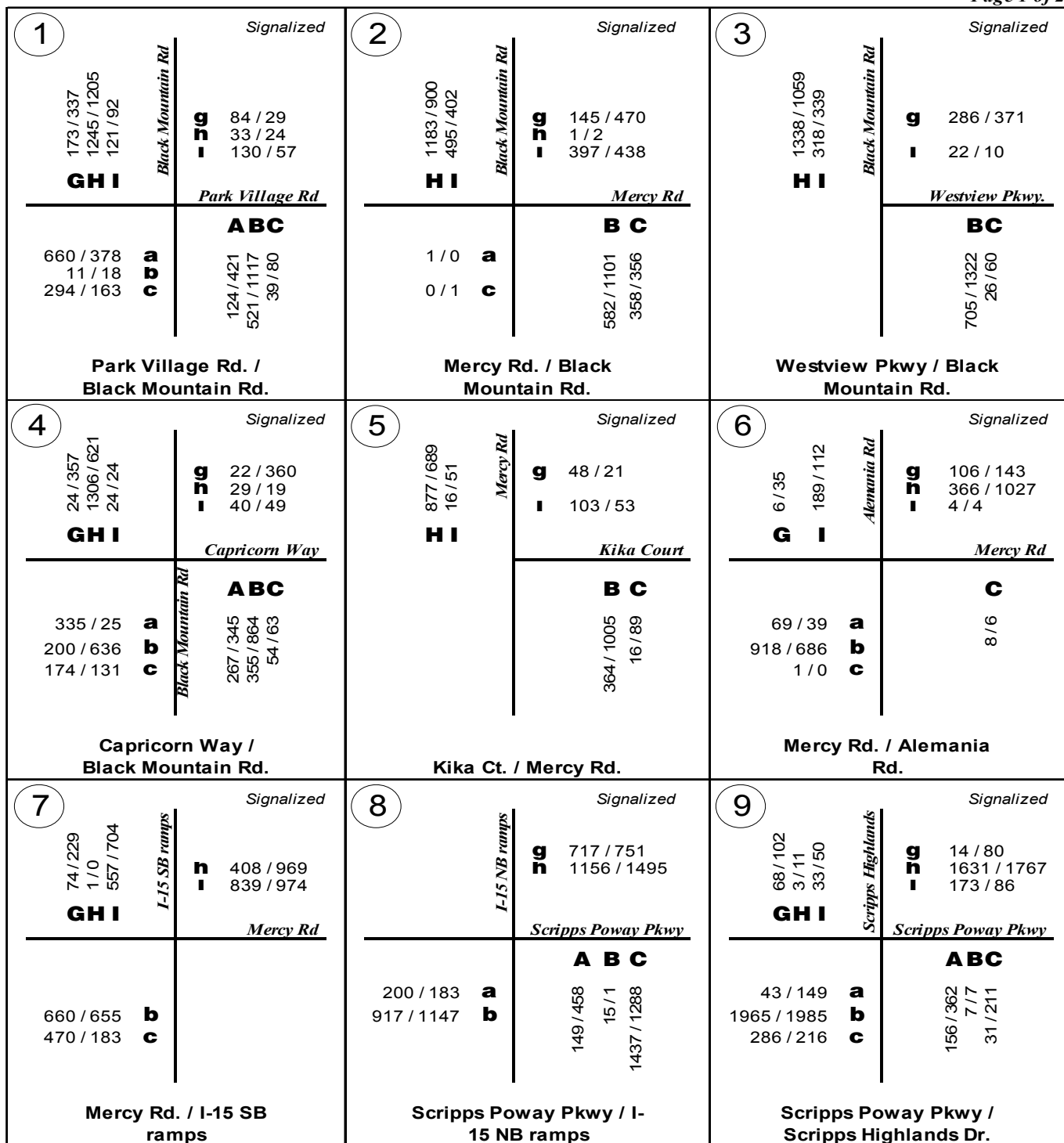


FIGURE 8-2

Near Term Without Project AM/PM Peak Hour Traffic

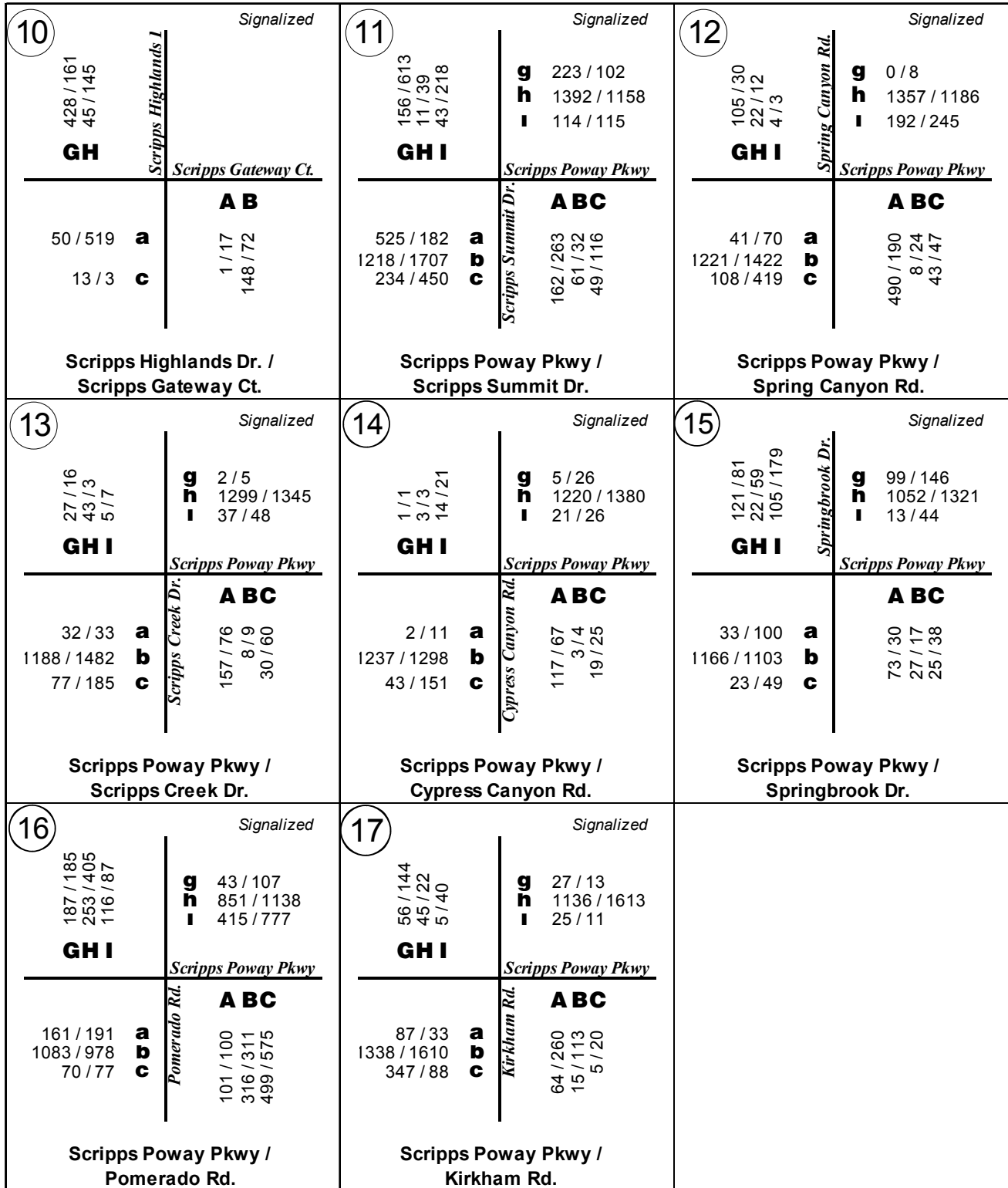


FIGURE 8-2

Near Term Without Project AM/PM Peak Hour Traffic

TABLE 8-2

Near Term Without Project Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Park Village Rd. / Black Mountain Rd.	Signalized	50.7	D	44.5	D
2	Mercy Rd. / Black Mountain Rd.	Signalized	33.4	C	33.5	C
3	Westview Pkwy / Black Mountain Rd.	Signalized	16.7	B	20.7	C
4	Capricorn Way / Black Mountain Rd.	Signalized	41.0	D	40.0	D
5	Kika Ct. / Mercy Rd.	Signalized	6.0	A	6.3	A
6	Mercy Rd. / Alemania Rd.	Signalized	15.6	B	11.2	B
7	Mercy Rd. / I-15 SB ramps	Signalized	34.2	C	37.6	D
8	Scripps Poway Pkwy / I-15 NB ramps	Signalized	10.1	B	15.4	B
9	Scripps Poway Pkwy / Scripps Highlands Dr.	Signalized	19.8	B	25.1	C
10	Scripps Highlands Dr. / Scripps Gateway Ct.	Signalized	18.3	B	12.1	B
11	Scripps Poway Pkwy / Scripps Summit Dr.	Signalized	29.9	C	33.3	C
12	Scripps Poway Pkwy / Spring Canyon Rd.	Signalized	27.1	C	39.9	D
13	Scripps Poway Pkwy / Scripps Creek Dr.	Signalized	27.0	C	24.5	C
14	Scripps Poway Pkwy / Cypress Canyon Rd.	Signalized	12.1	B	12.8	B
15	Scripps Poway Pkwy / Springbrook Dr.	Signalized	23.0	C	33.2	C
16	Scripps Poway Pkwy / Pomerado Rd.	Signalized	29.5	C	35.8	D
17	Scripps Poway Pkwy / Kirkham Rd.	Signalized	13.8	B	24.6	C

Notes:

LOS = Level of Service

9.0 NEAR TERM WITH PROJECT

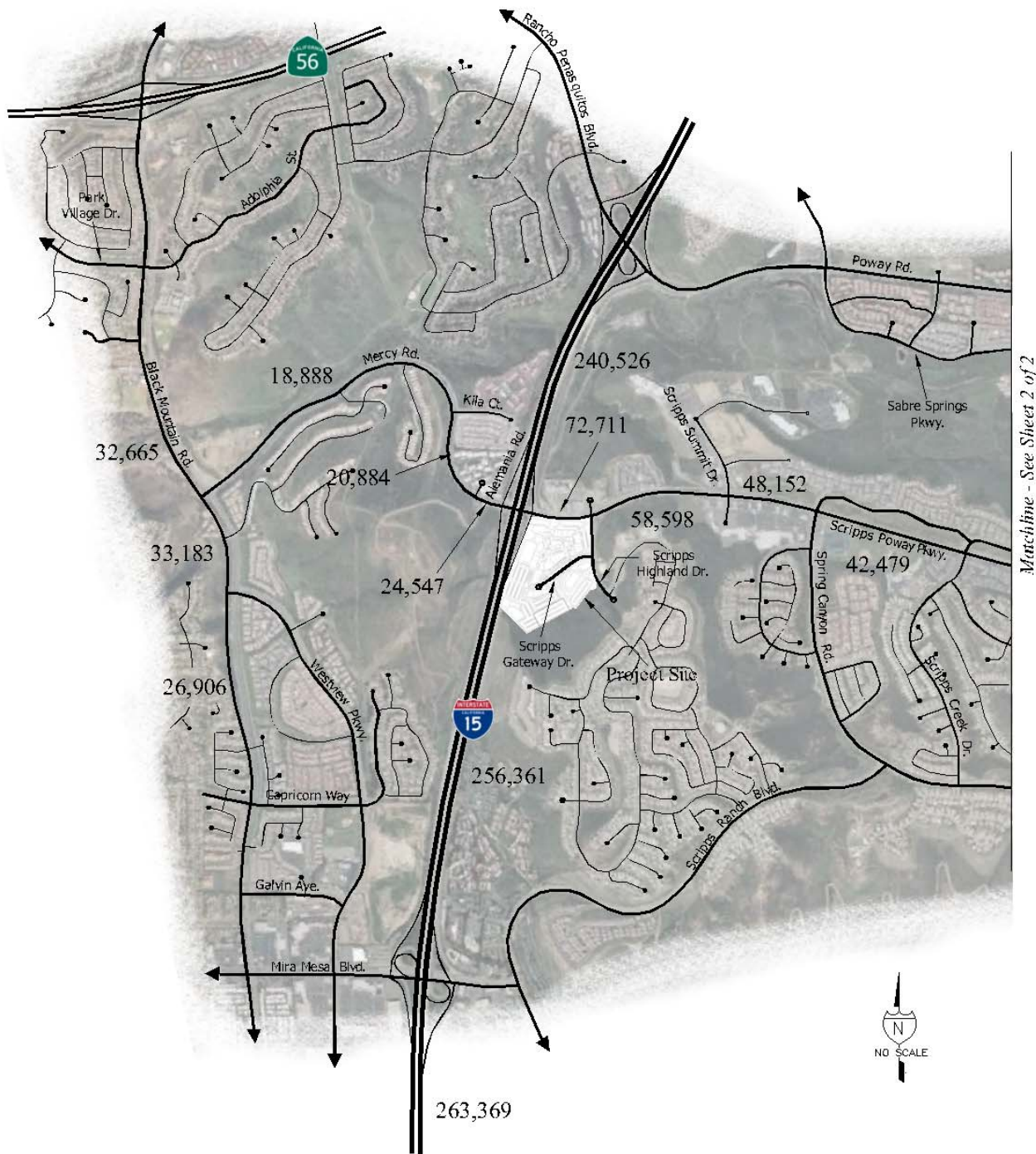
This section of the report evaluates the Near Term with Project traffic conditions by adding the “other projects” plus the Watermark project traffic to existing volumes and evaluating project traffic impacts.

9.1.1 STREET SEGMENTS

Figure 9-1 shows average daily traffic volumes with project traffic added to existing plus “other projects” traffic volumes.

Table 9-1 shows street segment levels of service with Watermark project traffic. The following street segments are projected to operate at an unacceptable arterial level of service:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Scripps Poway Pkwy.	I-15/ Scripps Highland	F
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Dr.	E
Scripps Poway Pkwy.	Scripps Highland Dr./ Scripps Summit Dr.	F
Scripps Poway Pkwy.	Scripps Creek Dr./ Cypress Canyon Rd.	E
Scripps Poway Pkwy.	Cypress Canyon Rd./ Angelique Street	E



Matchline - See Sheet 2 of 2

FIGURE 9-1

Near Term With Project Average Daily Traffic

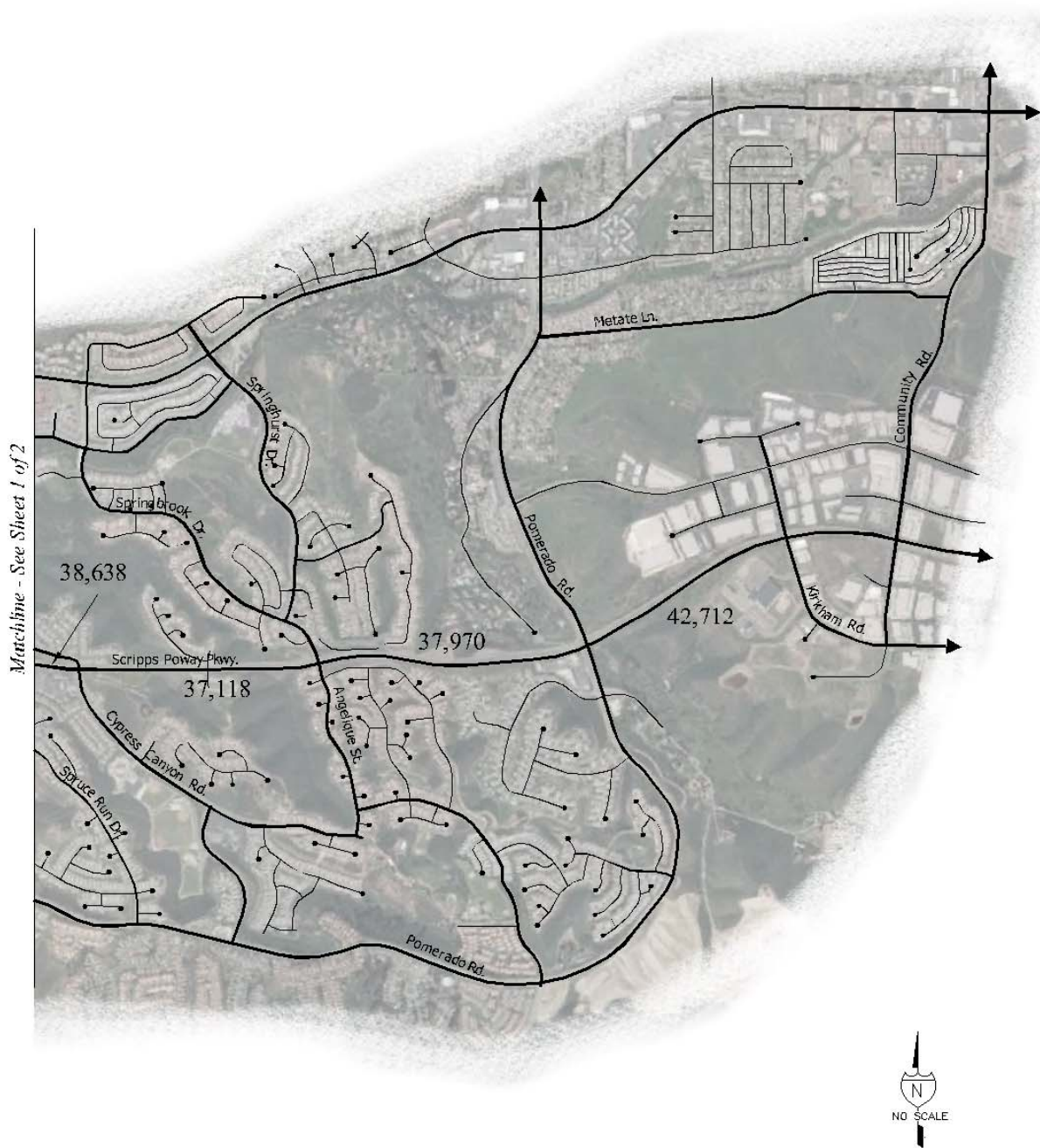


FIGURE 9-1

Near Term With Project Average Daily Traffic

TABLE 9-1

Near Term With Project Street Segment Levels of Service

Road	Segment	Jurisd.	# Lanes	Class.	Cap.	Volume	V/C	LOS
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	40,000	32,665	0.82	D
	Westview Pkwy./ Mercy Rd.	SD	6	PA	60,000	33,183	0.55	B
	Capricorn Way/ Westview Pkwy.	SD	6	PA	60,000	26,906	0.45	B
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	40,000	18,888	0.47	B
	Kika Ct./ Alemania Rd.	SD	4	4-M	40,000	20,884	0.52	B
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	40,000	24,547	0.61	C
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	60,000	72,711	1.21	F
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	60,000	58,598	0.98	E
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	60,000	48,152	0.80	C
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	40,000	42,479	1.06	F
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	40,000	38,638	0.97	E
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	40,000	37,118	0.93	E
	Angelique St./ Pomerado Rd.	Poway	6	PA	60,000	37,970	0.63	C
	Pomerado Rd./ Kirkham Rd.	Poway	6	PA	60,000	42,712	0.71	C

Legend:

Class. = Functional Class SD= San Diego

Cap. = Capacity @ LOS "E"

LOS = Level of Service

PA = 6 lane Prime Arterial

4-M = 4 Lane Major Arterial

Near Term With Project Arterial Analysis

Road	Segment	Jurisd.	Class.	Cap.	Volume	Direction	Speed (mph)		LOS	
							AM	PM	AM	PM
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	PA	60,000	72,711	Eastbound	16.3	5.1	E	F
						Westbound	22.4	13.4	C	E
	Scripps Highland Dr./ Scripps Summit Dr.	SD	PA	60,000	58,598	Eastbound	29.7	9.3	B	F
						Westbound	32.9	22.7	B	C
	Scripps Summit Dr./ Spring Canyon Rd.	SD	PA	60,000	48,152	Eastbound	18.0	16.2	D	E
						Westbound	10.0	11.1	F	F
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4-M	40,000	42,479	Eastbound	19.9	26.0	D	C
						Westbound	23.1	26.7	C	C
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4-M	40,000	38,638	Eastbound	24.2	21.7	C	D
						Westbound	22.9	23.3	C	C
	Cypress Canyon Rd./ Vail Ct.	SD	4-M	40,000	37,118	Eastbound	28.6	27.0	B	C
						Westbound	31.5	30.3	B	B
	Angelique St./ Pomerado Rd.	Poway	PA	60,000	37,970	Eastbound	28.4	24.7	B	C
						Westbound	25.6	19.4	C	D
Pomerado Rd./ Kirkham Rd.	Poway	PA	60,000	42,712	Eastbound	42.4	37.1	A	A	
					Westbound	36.3	33.1	A	B	

Legend:

Class. = Functional Class SD= San Diego

Cap. = Capacity @ LOS "E"

LOS = Level of Service

PA = 6 lane Prime Arterial

4-M = 4 Lane Major Arterial

9.1.2 INTERSECTIONS

Figure 9-2 shows existing plus “other projects” plus Watermark project combined traffic volumes during AM/PM peak hours at study area intersections.

Table 9-2 includes study area intersection levels of service with the Watermark project traffic added. There are two (2) intersections that are projected to operate at an unacceptable level of service (LOS “E” or “F”) in the AM and PM peak hours which are the following:

	<u>AM Peak Hour</u>	<u>PM Peak Hour</u>
Mercy Road / I-15 SB Ramps	LOS D	LOS E
Scripps Poway Parkway / Scripps Highlands Dr.	LOS C	LOS F

Appendix G includes the Near Term with Project Synchro worksheets.

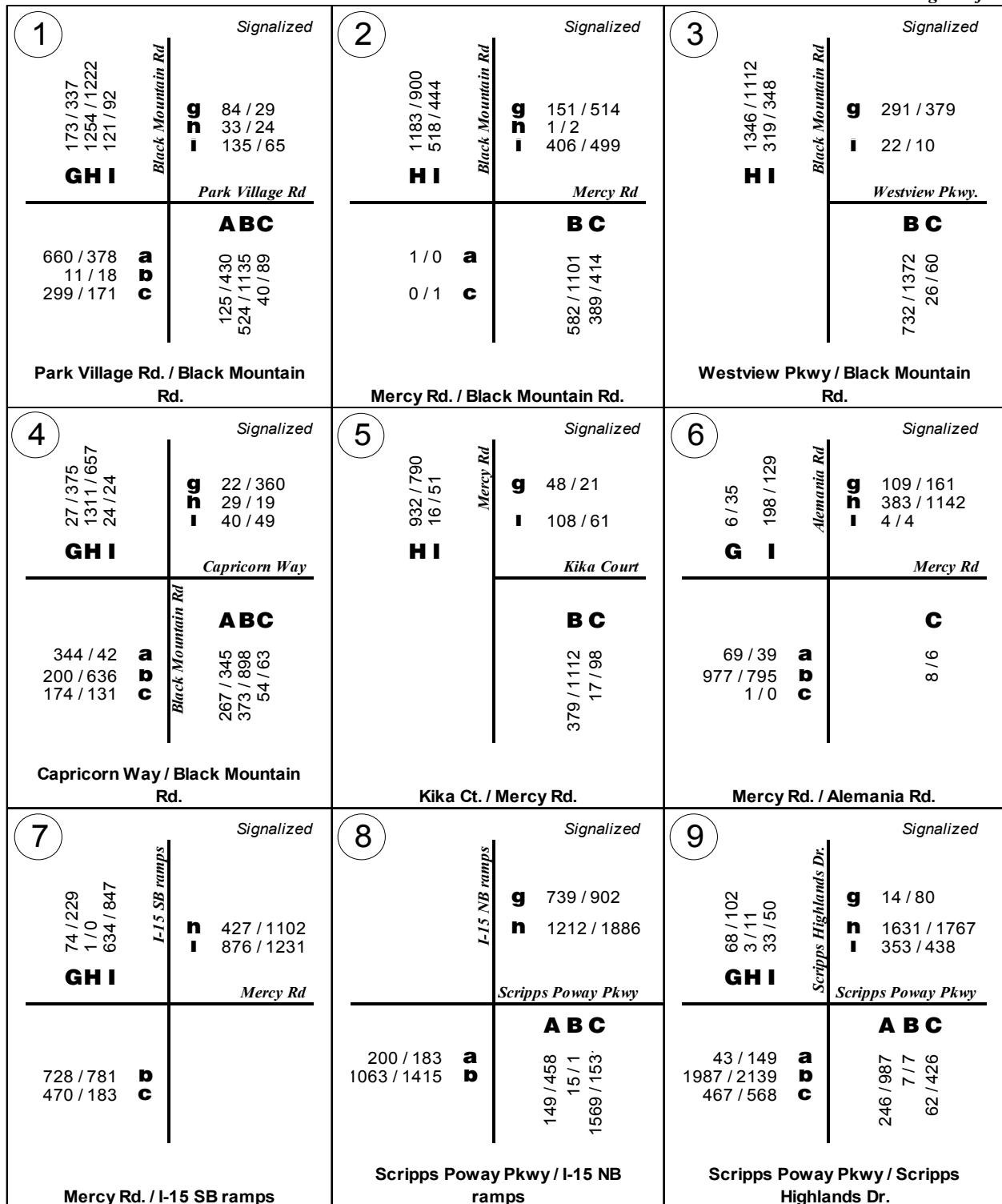


FIGURE 9-2

Near Term With Project AM/PM Peak Hour Traffic

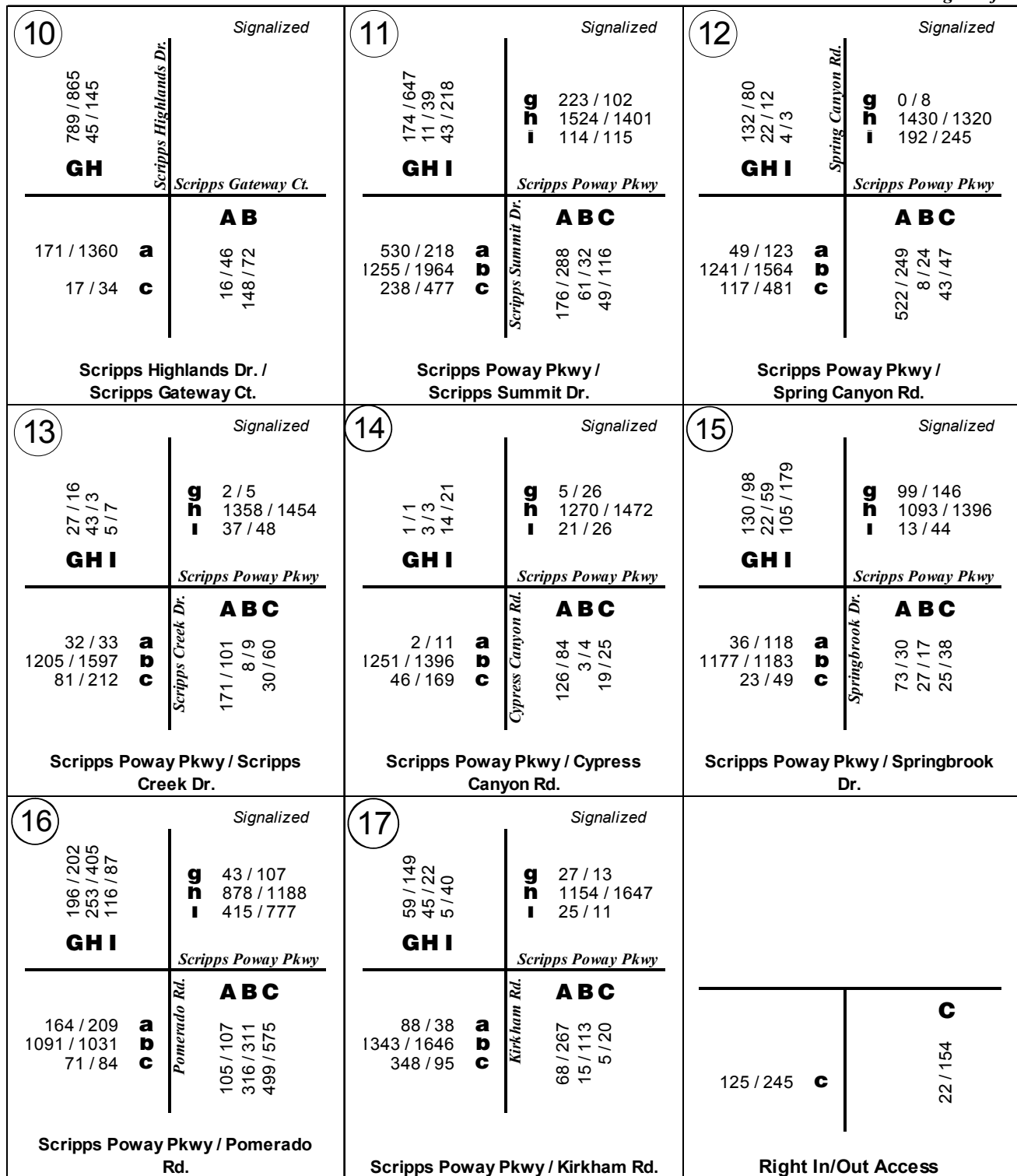


FIGURE 9-2

Near Term With Project AM/PM Peak Hour Traffic

TABLE 9-2

Near Term With Project Intersection Levels Of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Park Village Rd. / Black Mountain Rd.	Signalized	51.6	D	46	D
2	Mercy Rd. / Black Mountain Rd.	Signalized	34	C	35.6	D
3	Westview Pkwy / Black Mountain Rd.	Signalized	16.7	B	21.3	C
4	Capricorn Way / Black Mountain Rd.	Signalized	42.1	D	41	D
5	Kika Ct. / Mercy Rd.	Signalized	6.1	A	6.5	A
6	Mercy Rd. / Alemania Rd.	Signalized	15.7	B	11.9	B
7	Mercy Rd. / I-15 SB ramps	Signalized	37	D	66.7	E
8	Scripps Poway Pkwy / I-15 NB ramps	Signalized	10.2	B	19	B
9	Scripps Poway Pkwy / Scripps Highlands Dr.	Signalized	23.4	C	135.5	F
10	Scripps Highlands Dr. / Scripps Gateway Ct.	Signalized	7.1	A	20.7	C
11	Scripps Poway Pkwy / Scripps Summit Dr.	Signalized	39.1	D	45.2	D
12	Scripps Poway Pkwy / Spring Canyon Rd.	Signalized	29.1	C	49.4	D
13	Scripps Poway Pkwy / Scripps Creek Dr.	Signalized	27.6	C	29.4	C
14	Scripps Poway Pkwy / Cypress Canyon Rd.	Signalized	12.4	B	16.3	B
15	Scripps Poway Pkwy / Springbrook Dr.	Signalized	23.1	C	43.1	D
16	Scripps Poway Pkwy / Pomerado Rd.	Signalized	29.5	C	36.7	D
17	Scripps Poway Pkwy / Kirkham Rd.	Signalized	14.3	B	25.8	C

Notes:

LOS = Level of Service

10.0 HORIZON YEAR 2030 WITHOUT PROJECT

This section of the report evaluates the Year 2030 without project condition. The SANDAG Series 11 regional traffic forecast model is based on planning efforts involving all jurisdictions within the County of San Diego. SANDAG, as the regional planning agency collects data from these plans and collates this data within a traffic model. SANDAG also prepared the regional transportation plan (RTP) utilized by the traffic model as a basis for estimating future traffic. The Watermark project was added to this traffic model to estimate Year 2030 conditions with the project. Forecasted growth in traffic volumes from the traffic model was utilized to evaluate Year 2030 conditions with and without the project. To calculate Year 2030 conditions without the project, the Watermark project was subtracted from Year 2030 conditions with the project which were based on forecasted volumes. The ongoing I-15 freeway improvements were assumed complete prior to the Horizon Year 2030 consistent with ongoing work and plans by Caltrans. This includes the current I-15 “middle segments” and “south segments” as defined in the Transnet program.

10.1.1 STREET SEGMENTS

Street segment volumes for Year 2030 conditions without the project are shown in **Figure 10-1**. The street segment levels of service for Year 2030 conditions without the project are shown in **Table 10-1**. The following street segments are projected to operate at an unacceptable level of service:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Scripps Poway Pkwy.	I-15 / Scripps Highland	E
Scripps Poway Pkwy.	Spring Canyon Rd. / Scripps Creek Dr.	F



FIGURE 10-1

Horizon Year 2030 Without Project Average Daily Traffic Volumes

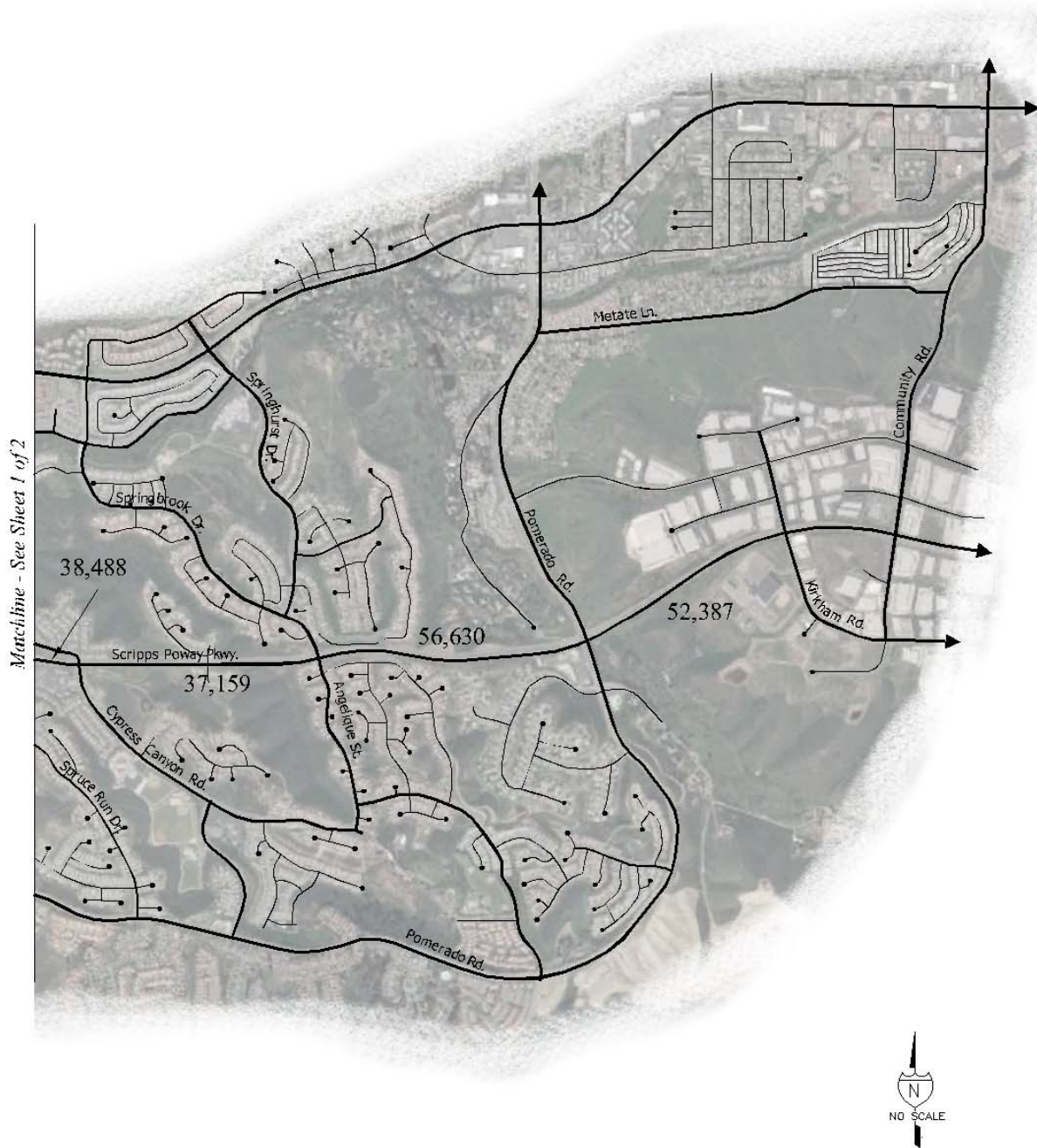


FIGURE 10-1

Horizon Year 2030 Without Project Average Daily Traffic Volumes

TABLE 10-1
Horizon Year 2030 Without Project Street Segment Levels of Service

Road	Segment	Jurisd.	# Lanes	Class.	Cap.	Volume	V/C	LOS
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	40,000	33,972	0.85	D
	Westview Pkwy / Mercy Rd.	SD	6	PA	60,000	34,401	0.57	B
	Capricorn Way/ Westview Pkwy.	SD	6	PA	60,000	39,587	0.66	C
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	40,000	18,174	0.45	B
	Kika Ct./ Alemania Rd.	SD	4	4-M	40,000	21,888	0.55	C
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	40,000	24,017	0.60	C
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	60,000	59,880	1.00	E
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	60,000	52,157	0.87	D
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	60,000	46,220	0.77	C
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	40,000	40,032	1.00	F
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	40,000	38,488	0.96	E
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	40,000	37,159	0.93	E
	Angelique St./ Pomerado Rd.	Poway	6	PA	60,000	56,630	0.94	E
	Pomerado Rd./ Kirkham Rd.	Poway	6	PA	60,000	52,387	0.87	D

Legend:

Class. = Functional Class SD= San Diego
 Cap. = Capacity @ LOS "E"
 LOS = Level of Service
 PA = 6 lane Prime Arterial
 4-M = 4 Lane Major Arterial

Horizon Year 2030 Without Project Arterial Analysis

Road	Segment	Jurisd.	Class.	Cap.	Volume	Direction	Speed (mph)		LOS	
							AM	PM	AM	PM
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	PA	60,000	59,880	Eastbound	14.9	13.8	E	E
						Westbound	22.2	20.2	C	D
	Scripps Highland Dr./ Scripps Summit Dr.	SD	PA	60,000	52,157	Eastbound	29.7	13.4	B	E
						Westbound	31.1	24.7	B	C
	Scripps Summit Dr./ Spring Canyon Rd.	SD	PA	60,000	46,220	Eastbound	14.4	15.6	E	E
						Westbound	12.0	16.7	F	E
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4-M	40,000	40,032	Eastbound	20.1	21.1	D	D
						Westbound	23.6	26.8	C	C
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4-M	40,000	38,488	Eastbound	23.8	23.0	C	C
						Westbound	23.2	24.7	C	C
	Cypress Canyon Rd./ Vail Ct.	SD	4-M	40,000	37,159	Eastbound	24.4	22.2	C	C
						Westbound	31.4	30.9	B	B
	Angelique St./ Pomerado Rd.	Poway	PA	60,000	56,630	Eastbound	24.5	24.1	C	C
						Westbound	25.0	20.4	C	D
Pomerado Rd./ Kirkham Rd.	Poway	PA	60,000	52,387	Eastbound	39.5	32.5	A	B	
					Westbound	35.2	31.8	A	B	

Legend:

Class. = Functional Class SD= San Diego
 Cap. = Capacity @ LOS "E"
 LOS = Level of Service
 PA = 6 lane Prime Arterial
 4-M = 4 Lane Major Arterial

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Scripps Poway Pkwy.	Scripps Creek Dr./ Cypress Canyon Rd.	E
Scripps Poway Pkwy.	Angelique St./ Pomerado Rd.	E
Scripps Poway Pkwy.	Cypress Canyon Rd./ Angelique Street	E

10.2 INTERSECTIONS

AM/PM peak hour turn volumes were established by using a factoring method based on Near Term with Project volumes and Horizon Year 2030 with Project volumes. All study intersections AM/PM peak hour turn volumes used the factoring method to develop Horizon Year 2030 with project volumes. Project only peak hour volumes were subtracted from Horizon Year 2030 with project volumes to reflect Horizon Year 2030 without project peak hour volumes. The factoring worksheets for all study intersections can be found in Appendix H.

Existing lane configurations, as shown in **Figure 5-2**, were used in both long term cumulative scenarios. **Figure 10-2** shows the Horizon Year 2030 Without Project peak hour volumes at the intersections analyzed.

Table 10-2 shows the Horizon year 2030 without project peak hour intersection levels of service. As shown, only one intersection is projected to operate at an unacceptable level of service “E” in the PM peak hour which is at Black Mountain Road and Park Village Road.

The Synchro worksheets for the Horizon Year 2030 without Project condition may be found in Appendix I.

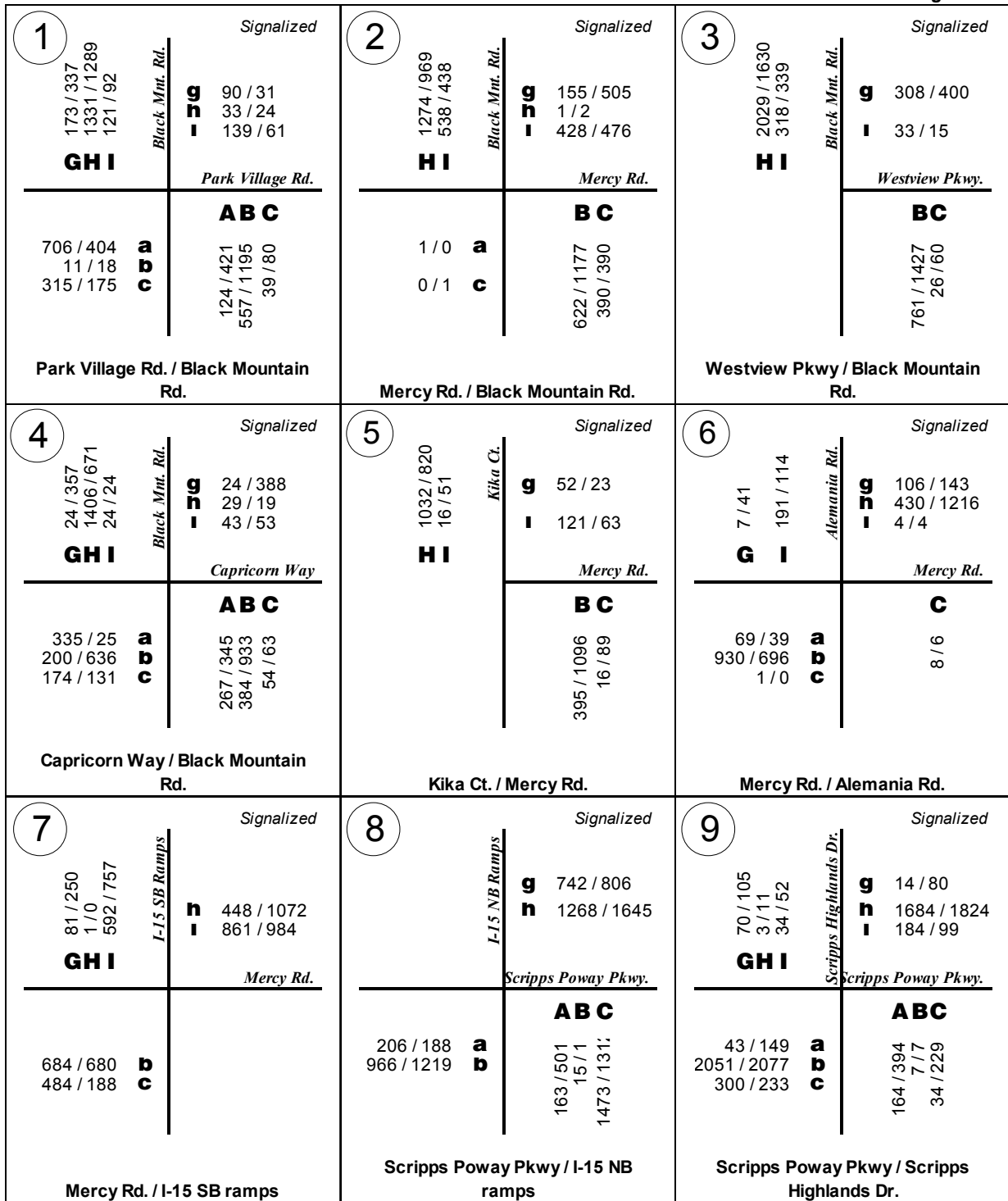


FIGURE 10-2

Horizon Year 2030 Without Project AM / PM Peak Hour Traffic Volumes

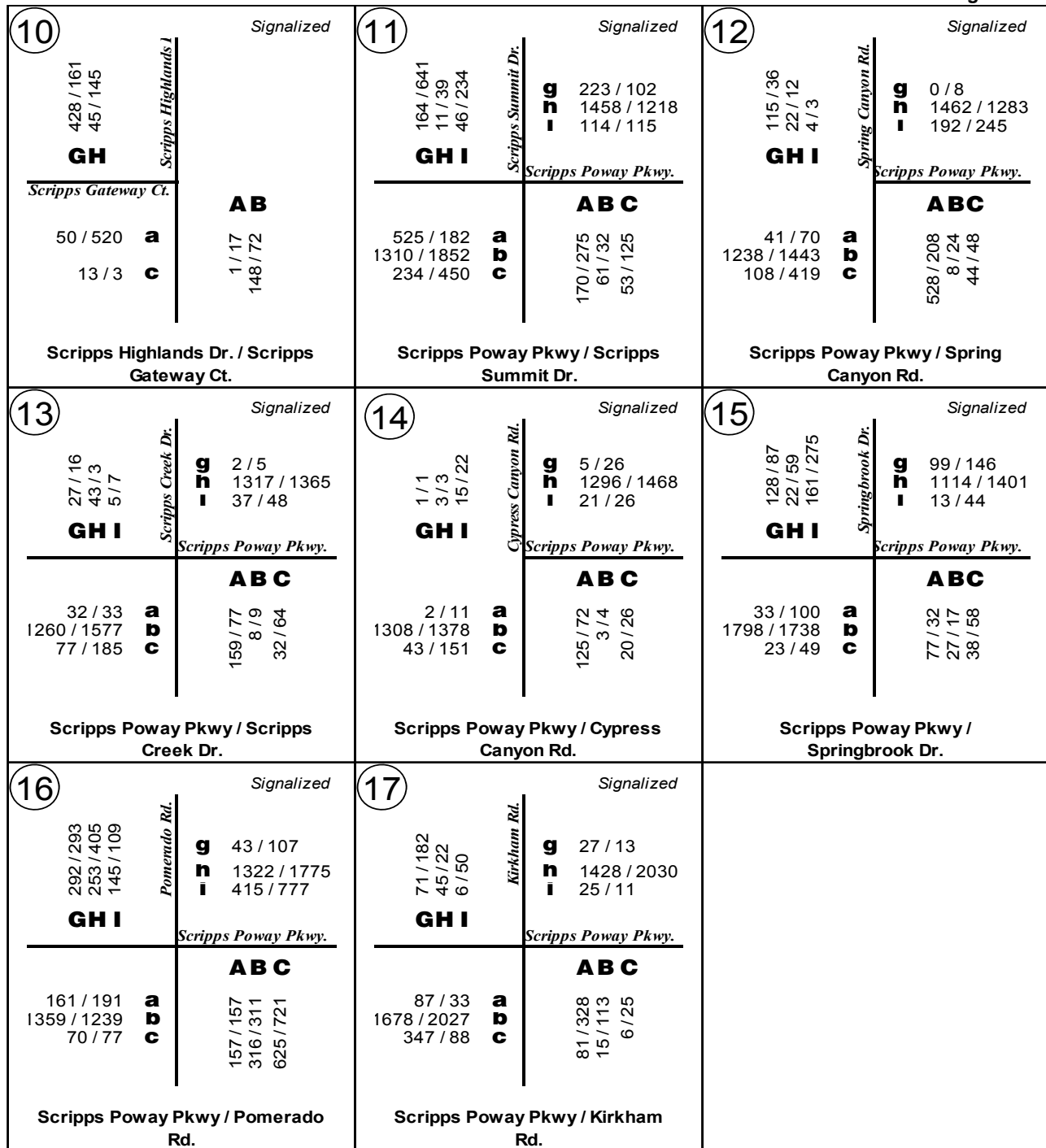


FIGURE 10-2

Horizon Year 2030 Without Project AM / PM Peak Hour Traffic Volumes

TABLE 10-2

Horizon Year 2030 Without Project Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Park Village Rd. / Black Mountain Rd.	Signalized	56.0	E	45.0	D
2	Mercy Rd. / Black Mountain Rd.	Signalized	34.0	C	35.2	D
3	Westview Pkwy / Black Mountain Rd.	Signalized	16.8	B	20.8	C
4	Capricorn Way / Black Mountain Rd.	Signalized	45.1	D	40.7	D
5	Kika Ct. / Mercy Rd.	Signalized	6.4	A	6.5	A
6	Mercy Rd. / Alemania Rd.	Signalized	15.4	B	12.3	B
7	Mercy Rd. / I-15 SB ramps	Signalized	35.0	C	39.2	D
8	Scripps Poway Pkwy / I-15 NB ramps	Signalized	10.5	B	27.6	C
9	Scripps Poway Pkwy / Scripps Highlands Dr.	Signalized	22.0	C	30.3	C
10	Scripps Highlands Dr. / Scripps Gateway Ct.	Signalized	18.3	B	12.2	B
11	Scripps Poway Pkwy / Scripps Summit Dr.	Signalized	32.4	C	48.8	D
12	Scripps Poway Pkwy / Spring Canyon Rd.	Signalized	33.1	C	34.6	C
13	Scripps Poway Pkwy / Scripps Creek Dr.	Signalized	27.2	C	25.2	C
14	Scripps Poway Pkwy / Cypress Canyon Rd.	Signalized	12.5	B	13.9	B
15	Scripps Poway Pkwy / Springbrook Dr.	Signalized	32.4	C	48.2	D
16	Scripps Poway Pkwy / Pomerado Rd.	Signalized	37.9	D	44.7	D
17	Scripps Poway Pkwy / Kirkham Rd.	Signalized	17.2	B	35.8	D

Notes:

LOS = Level of Service

11.0 HORIZON YEAR 2030 WITH PROJECT

As previously discussed, Year 2030 with project volumes were taken from the SANDAG travel forecast model projections. A factoring method based on projected growth rates was utilized to estimate future peak hour volumes. As discussed in Section 10.0, several freeway improvements were assumed to be complete for I-15.

11.1.1 STREET SEGMENTS

Figure 11-1 shows the Year 2030 With Project street segment traffic volumes.

An analysis was completed for street segments in the Year 2030 With Project condition. The following street segments are projected to operate at an unacceptable level of service:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Scripps Poway Pkwy.	I-15/ Scripps Highland Dr.	F
Scripps Poway Pkwy.	Scripps Highland Dr./ Scripps Summit Dr.	E
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Dr.	F
Scripps Poway Pkwy.	Scripps Creek Dr./ Cypress Canyon Rd.	F
Scripps Poway Pkwy.	Cypress Canyon Rd./ Angelique Street	E
Scripps Poway Pkwy.	Angelique Street/ Pomerado Road	E

11.1.2 INTERSECTIONS

Figure 11-2 shows the expected peak hour volumes at Year 2030 With Project for the intersections analyzed. **Table 11-2** shows the AM and PM peak hour levels of service for the Year 2030 with Project condition. As shown, three (3) intersections are projected to operate at unacceptable levels of service which are the following:

	<u>AM Peak Hour</u>	<u>PM Peak Hour</u>
Park Village Rd. / Black Mountain Rd.	LOS E	LOS D
Mercy Road / I-15 SB Ramps	LOS D	LOS E
Scripps Poway Parkway / Scripps Highlands Dr.	LOS C	LOS F

Appendix J includes Synchro worksheets for Year 2030 with Project condition.

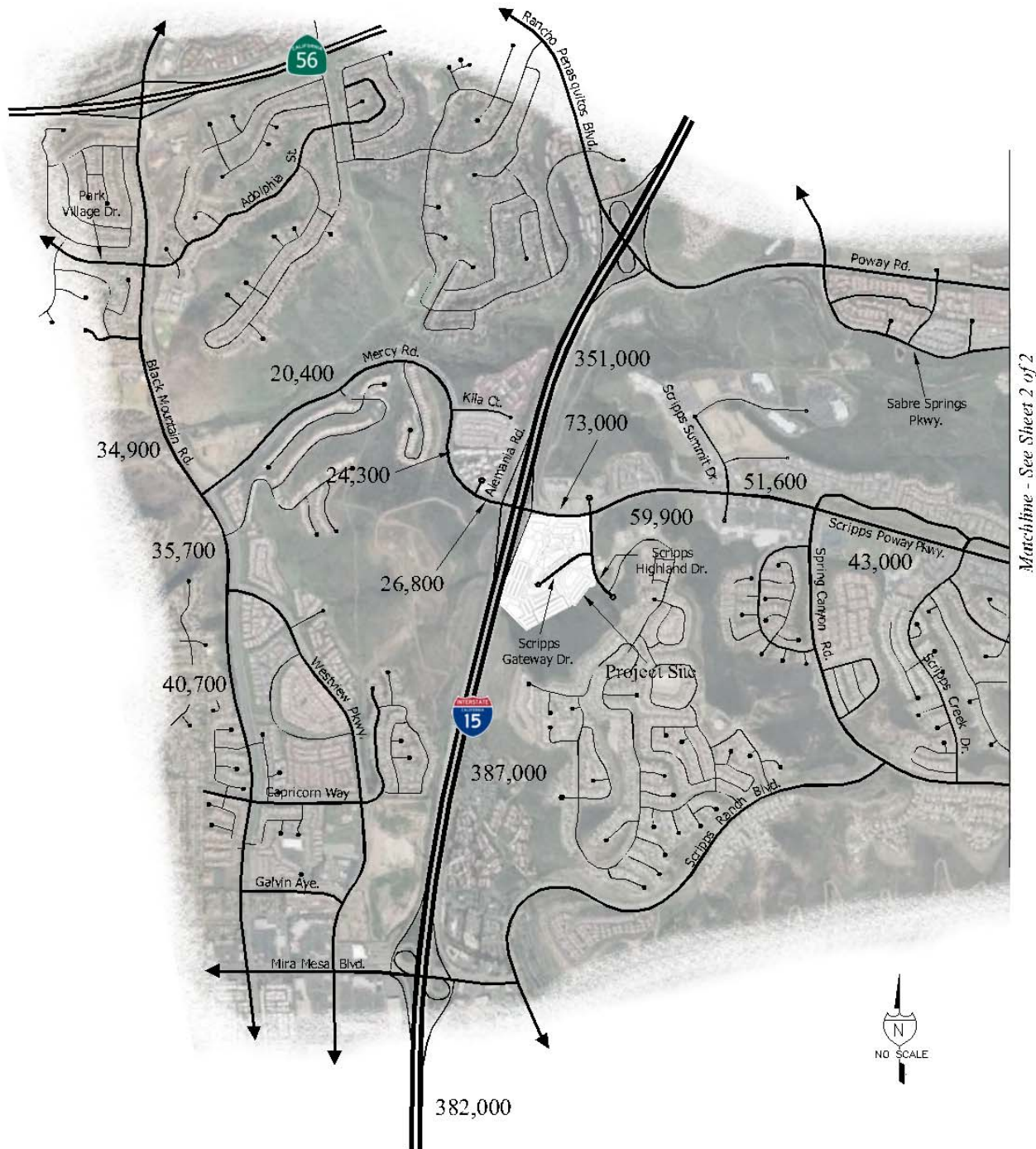


FIGURE 11-1

Horizon Year 2030 With Project Average Daily Traffic Volumes

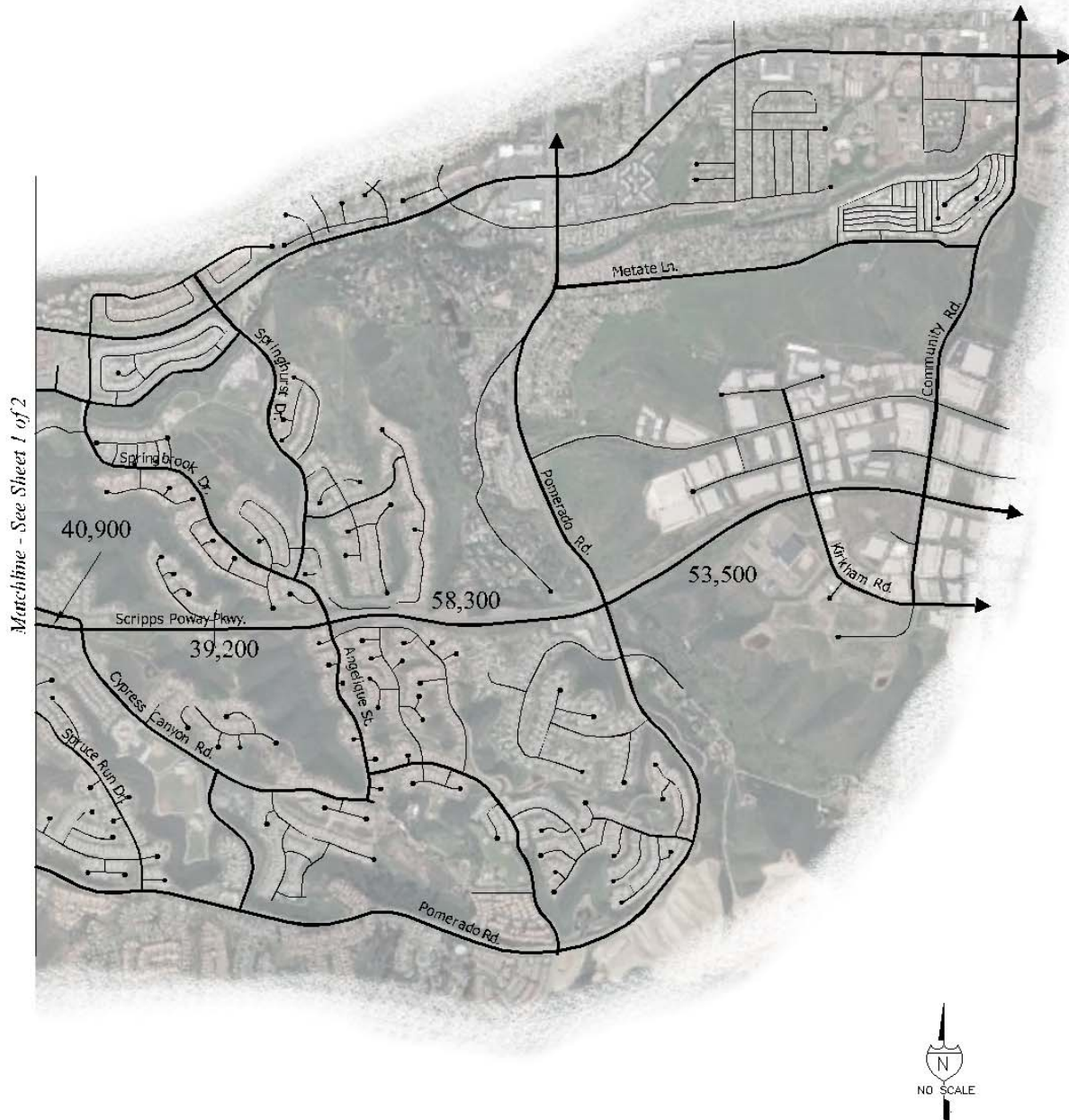


FIGURE 11-1
Horizon Year 2030 With Project Average Daily Traffic Volumes

TABLE 11-1

Horizon Year 2030 With Project Street Segment Levels of Service

Road	Segment	Jurisd.	# Lanes	Class.	Cap.	Volume	V/C	LOS
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	40,000	34,900	0.87	D
	Westview Pkwy./Mercy Rd.	SD	6	PA	60,000	35,700	0.60	C
	Capricorn Way/ Westview Pkwy.	SD	6	PA	60,000	40,700	0.68	C
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	40,000	20,400	0.51	B
	Kika Ct./ Alemania Rd.	SD	4	4-M	40,000	24,300	0.61	C
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	40,000	26,800	0.67	C
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	60,000	73,000	1.22	F
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	60,000	59,900	1.00	E
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	60,000	51,600	0.86	D
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	40,000	43,000	1.08	F
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	40,000	40,900	1.02	F
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	40,000	39,200	0.98	E
	Angelique St./ Pomerado Rd.	Poway	6	PA	60,000	58,300	0.97	E
	Pomerado Rd./ Kirkham Rd.	Poway	6	PA	60,000	53,500	0.89	D

Legend:

Class. = Functional Class SD= San Diego
 Cap. = Capacity @ LOS "E"
 LOS = Level of Service
 PA = 6 lane Prime Arterial
 4-M = 4 Lane Major Arterial

Horizon Year 2030 With Project Arterial Analysis

Road	Segment	Jurisd.	Class.	Cap.	Volume	Direction	Speed (mph)		LOS	
							AM	PM	AM	PM
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	PA	60,000	73,000	Eastbound	10.4	10.4	F	F
						Westbound	17.7	17.7	D	D
	Scripps Highland Dr./ Scripps Summit Dr.	SD	PA	60,000	59,900	Eastbound	9.0	10.1	F	F
						Westbound	21.4	21.4	D	D
	Scripps Summit Dr./ Spring Canyon Rd.	SD	PA	60,000	51,600	Eastbound	15.9	8.7	E	F
						Westbound	12.5	13.6	F	E
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4-M	40,000	43,000	Eastbound	22.5	22.5	C	C
						Westbound	26.3	25.5	C	C
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4-M	40,000	40,900	Eastbound	21.0	21.0	D	D
						Westbound	22.5	22.5	C	C
	Cypress Canyon Rd./ Vail Ct.	SD	4-M	40,000	39,200	Eastbound	22.9	22.9	C	C
						Westbound	29.9	29.9	B	B
	Angelique St./ Pomerado Rd.	Poway	PA	60,000	58,300	Eastbound	23.2	23.2	C	C
						Westbound	18.6	18.6	D	D
Pomerado Rd./ Kirkham Rd.	Poway	PA	60,000	53,500	Eastbound	31.2	31.2	B	B	
					Westbound	31.5	31.5	B	B	

Legend:

Class. = Functional Class SD= San Diego
 Cap. = Capacity @ LOS "E"
 LOS = Level of Service
 PA = 6 lane Prime Arterial
 4-M = 4 Lane Major Arterial

Notes:

Taken from Sandag Series 11 traffic model.

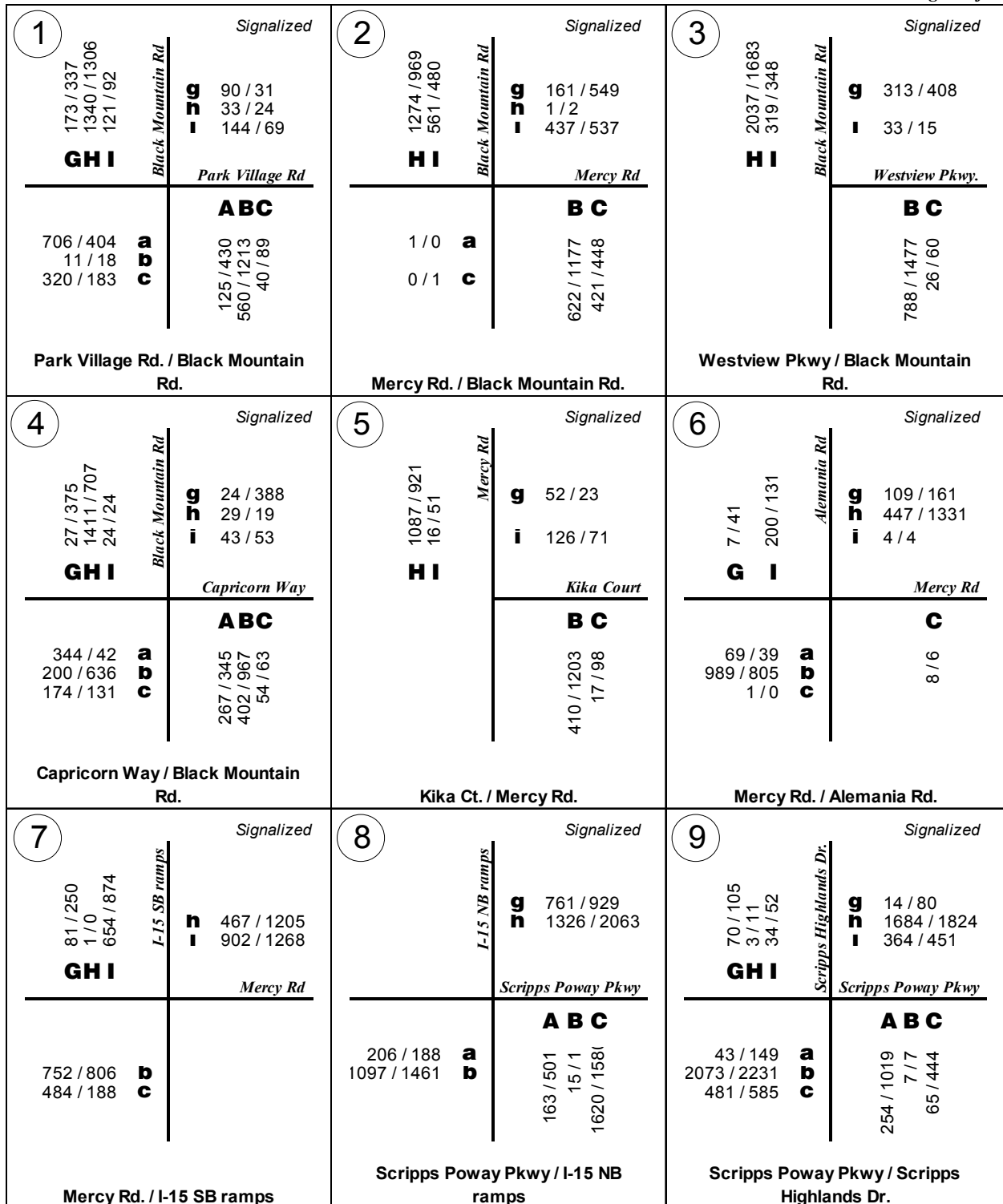


FIGURE 11-2

Horizon Year 2030 With Project AM / PM Peak Hour Traffic Volumes

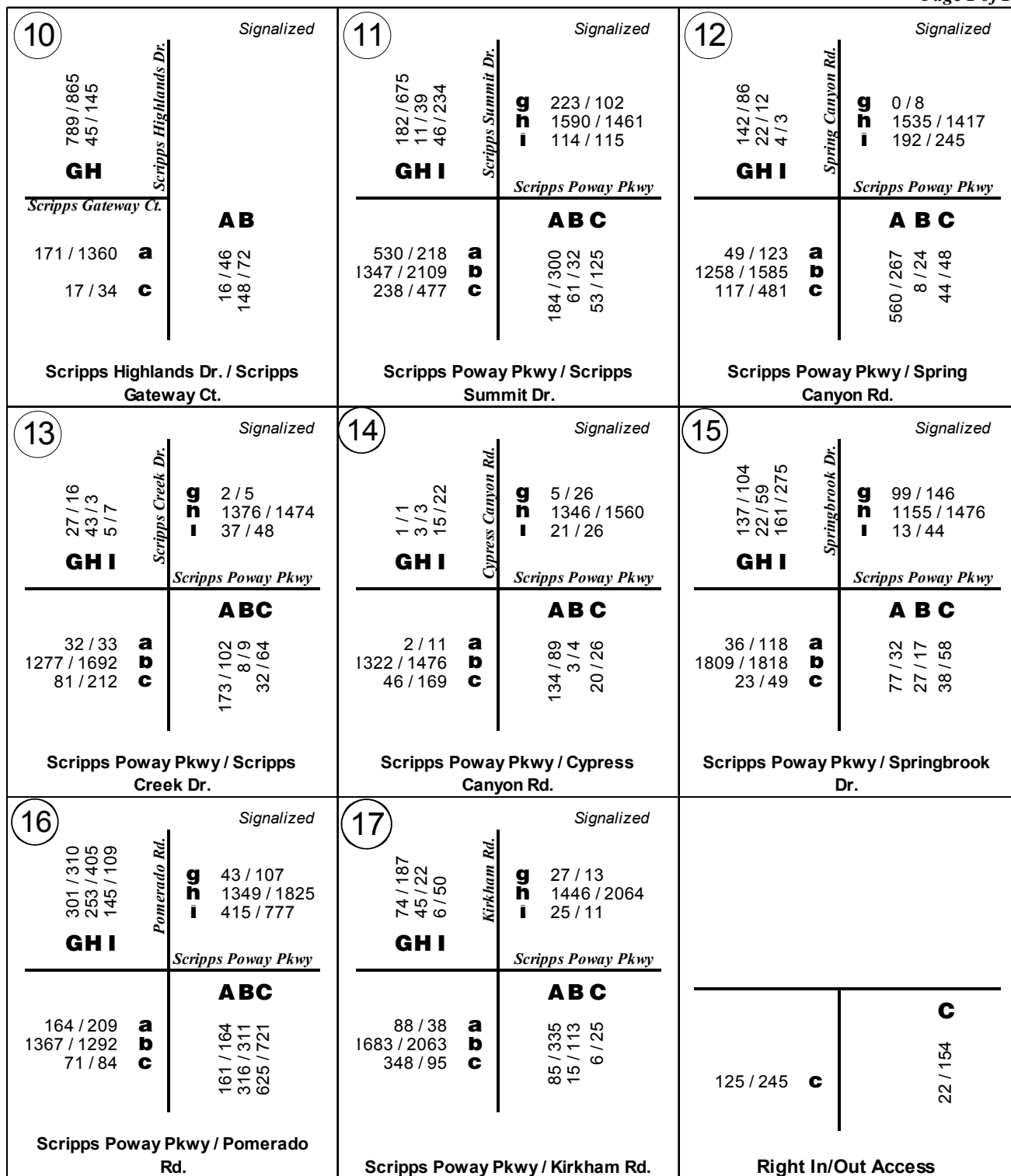


FIGURE 11-2

Horizon Year 2030 With Project AM / PM Peak Hour Traffic Volumes

TABLE 11-2

Horizon Year 2030 With Project Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Park Village Rd. / Black Mountain Rd.	Signalized	56.5	E	46.8	D
2	Mercy Rd. / Black Mountain Rd.	Signalized	34.5	C	37.5	D
3	Westview Pkwy / Black Mountain Rd.	Signalized	16.9	B	22.3	C
4	Capricorn Way / Black Mountain Rd.	Signalized	46.2	D	42.6	D
5	Kika Ct. / Mercy Rd.	Signalized	6.5	A	7.1	A
6	Mercy Rd. / Alemania Rd.	Signalized	15.6	B	12.7	B
7	Mercy Rd. / I-15 SB ramps	Signalized	38.6	D	68.3	E
8	Scripps Poway Pkwy / I-15 NB ramps	Signalized	11.6	B	30.5	C
9	Scripps Poway Pkwy / Scripps Highlands Dr.	Signalized	24.7	C	178.6	F
10	Scripps Highlands Dr. / Scripps Gateway Ct.	Signalized	7.1	A	21.3	C
11	Scripps Poway Pkwy / Scripps Summit Dr.	Signalized	41.8	D	52.7	D
12	Scripps Poway Pkwy / Spring Canyon Rd.	Signalized	34.7	C	51.8	D
13	Scripps Poway Pkwy / Scripps Creek Dr.	Signalized	27.6	C	28.5	C
14	Scripps Poway Pkwy / Cypress Canyon Rd.	Signalized	14	B	19	B
15	Scripps Poway Pkwy / Springbrook Dr.	Signalized	33.3	C	51.9	D
16	Scripps Poway Pkwy / Pomerado Rd.	Signalized	38.2	D	47.1	D
17	Scripps Poway Pkwy / Kirkham Rd.	Signalized	17.5	B	39.8	D

Notes:

LOS = Level of Service

12.0 TRANSIT, PARKING AND ONSITE CIRCULATION

12.1.1 TRANSIT

Transit routes in the project vicinity are shown in **Figure 12-1**. As can be seen, there is no transit service in the vicinity. The closest transit service is via transit routes on I-15. There is both Limited and Express service on I-15. However, there are no transit stops within 1 mile of the project site. Therefore, the project is not anticipated to have any effects on transit service.

12.1.2 PARKING

Parking for the Watermark project is expected to be accommodated wholly onsite. Through a combination of parking structures and surface parking, a total of 2,192 spaces are expected to be provided. **Figure 12-2** shows the tabulation of expected parking. Utilizing City of San Diego standard parking ratios consistent with the Municipal Code, a minimum of 1,982 parking spaces are required (without applying shared parking). The number of parking spaces planned to be provided exceeds the minimum requirement. **Figure 12-3** shows the anticipated parking locations and layout.

As a large, multi-use project, the Watermark project would be eligible to take advantage of shared parking per the municipal code. If shared parking were proposed, a shared parking calculations consistent with the City of San Diego Municipal Code would need to be completed. The total parking provided for the site would need to exceed the minimum Code requirements.

FIGURE 12-1

Area Transit Service

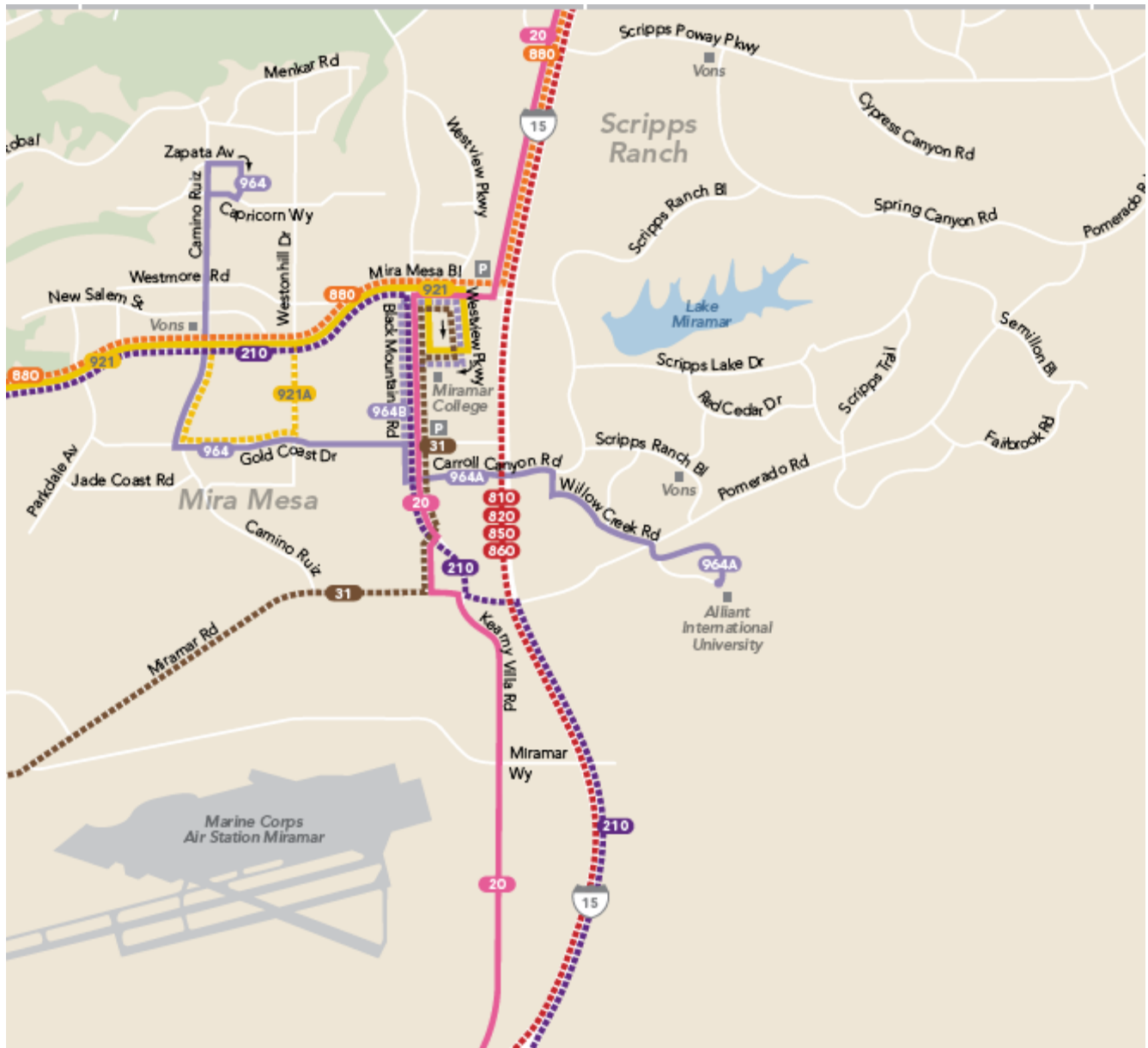


FIGURE 12-2 Parking Summary

PARKING SUMMARY

Use	floor location	floor area SF	ratio space per 1000 SF 142-05D,E	parking spaces	WATERMARK PARKING REQUIREMENTS								
					carpool assigned 0.3 per 1000 SF 142-05F	accessible assigned 2%	motorcycle 2% 142.0530 (G)	bicycle 0.01 per 1000 SF 142-05D, E, F	office bicycle 0.03 per 1000 SF 142-05F	bicycle locker 0.03 per 1000 SF 142-05F	shower facility 142-05F	off-street loading 142-10B	
Mixed-Use Retail	Ground	177,021 sf	5	885	n/a			2					7
Mixed-Use Retail	2nd Floor	34,494 sf	4	138	n/a			0					2
Mixed-Use Restaurant	2nd Floor	13,543 sf	4	54	n/a			0					1
Theater	Ground	35,917 sf	1 per 3.3. seats	97	n/a			2					0
Pad Restaurant	Ground	10,000 sf	15	150	n/a			0					0
Mixed-Use Office	2nd to 6th	132,007 sf	4	528	40			n/a	4	4			1
Hotel	Ground to 5th	70,540 sf	1 per guestroom	130	n/a			3					2
Service/Storage (all uses)	varies	129,301 sf	0	0	n/a			0					3
Total required		602,823 sf		1,982	40	40	40	7	4	4	2		16
Parking Structure on-site				1727	44	42	43						15
Surface Parking on-site				248		13							1
Pad A Parking off-site				150									
Hotel Parking off-site				67									
Total provided				2192	44	55	43	18	4	4	2		16

Note: off- street loading areas are shared for Mixed- Use Retail.

NOTES: 1. 4 PER 1000 PARKING IS REQUIRED FOR SECOND FLOOR RETAIL PER SDMC 142-05D FOOTNOTE 4.
2. THEATER SF IS BASED ON 320 SEATS.

Sheet Index

(See Next Page)

FIGURE 12-3
Parking Layout

12.3.1 ACCESS ANALYSIS

As discussed previously, the Watermark project is expected to take access via Scripps Poway Parkway at a channelized right in/out driveway and at an existing signalized intersection at Scripps Gateway Court and Scripps Highland Drive. Due to the access configuration for the Watermark project, all project traffic except the right turns in at the right in/out access on Scripps Poway Parkway, will travel through the intersection of Scripps Poway Parkway at Scripps Highland Drive. Therefore, two signalized intersections and one driveway will accommodate all of the project traffic. The two signalized intersections were analyzed using driveway trip generation rates as previously discussed in Section 3.0. Additionally, due to the presence of the Med-Impact office buildings which were not constructed at the time of the existing counts but which were instead added as an “other project”, the access analysis is complicated slightly. Expected trip generation from the Med-Impact project was added to the Watermark project traffic since they utilize the same access and would function as a cohesive site for access purposes.

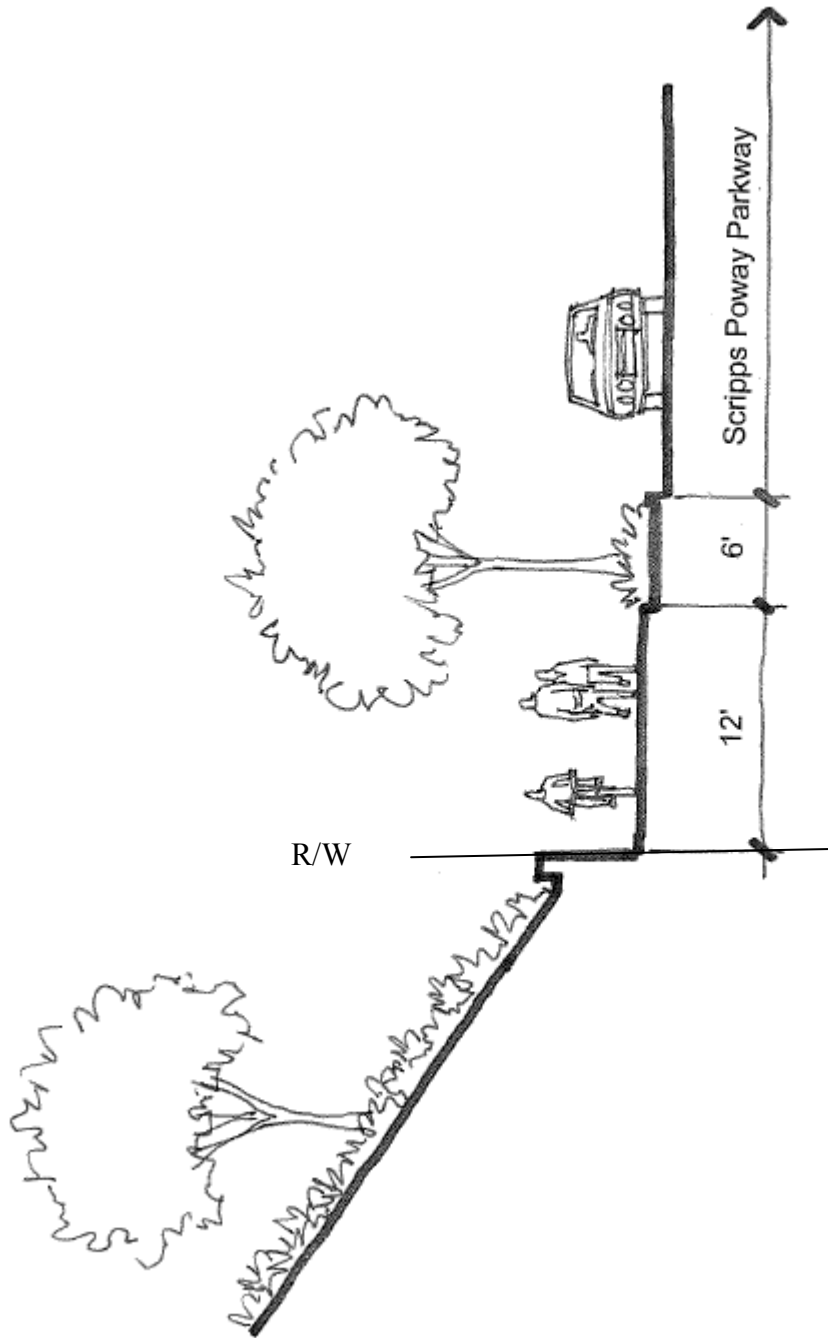
The expected traffic volumes from this analysis are included in other sections of this report. It must be noted that for access analysis purposes, the “project only” volumes include the Med-Impact project traffic. The intersections of Scripps Highland Drive at Scripps Poway Parkway and Scripps Highland Drive at Scripps Gateway Court were analyzed at ultimate project and community buildout to be conservative since these volumes would be highest. These volumes are shown on **Figure 11-2** as Horizon Year 2030 + Project peak hour traffic. With a slight reconfiguration of the intersections including a triple left turn lane (sharing the thru lane) and switch to split phasing for the northbound leg of Scripps Poway Parkway at Scripps Highland Drive, acceptable levels of service “D” or better can be achieved in all peak hours. See **Appendix K** for detailed analysis results.

The right in/out driveway proposed on Scripps Poway Parkway would be a new access between the I-15 ramps and Scripps Highland Drive. When this access is constructed, the existing bike lane on the south side of Scripps Poway Parkway would need to be relocated and constructed as a multi-use path adjacent to the project site in order to allow for safer travel for bicyclists. This would require a dedication of 14 feet along the full project frontage of the Watermark project site in order to be achieved. **Figure 12-4** shows the expected multi-use path and right in/out driveway access. **Figure 12-5** shows a preliminary layout of the right in/out driveway with the proposed dedication for the bike path highlighted.

Due to the large outbound volumes in the PM peak, great care was taken in designing the project site to accommodate vehicle queues at the intersection of Scripps Gateway/ Scripps Highland Drive. Leaving the major parking structure on the western edge of the site, there is at least 1,000 feet of queuing space prior to reaching the signalized intersection. Detailed queuing worksheets are provided in **Appendix K**.

Pedestrians and bicyclists will be accommodated safely along the project frontage on Scripps Poway Parkway in the new multi-use path shown in **Figure 12-4**. This path has been planned in consultation with City Staff in order to ensure appropriate and safe accommodation of pedestrians and bicyclists.

FIGURE 12-4
Multi-Use Path



Section Thru Bike / Pedestrian Path

13.0 FREEWAY AND RAMP METER ANALYSIS

Ramp meters have been evaluated at Scripps Poway Parkway on the Interstate 15 ramps. The Existing, Existing with Project, Near Term, Near Term With Project, Year 2030, and Year 2030 With Project scenarios have been analyzed and shown on **Tables 13-1** to **Tables 13-6**. In each condition, the meter rate is based on the most restrictive existing meter rates provided by Caltrans.

Existing ramp meter operations have been observed on August 30, 2011 during the AM and PM peak hours. At the I-15 Southbound Ramp on Mercy Road, the observed delay was approximately three minutes with a queue of at least 750 feet or greater. This queue exceeded the ramp storage and overflowed into the Interchange several times. At the I-15 Northbound Ramp, the observed delay was far less at approximately 1.5 minutes with a queue of approximately 400 feet.

Table 13-7 shows the Existing with and without project comparison. **Table 13-8** shows the Near Term with and without project comparison. A significant impact occurs at the ramp if the change in delay between the two conditions is greater than two or one minutes and the ramp experiences a delay greater than 15 minutes with the freeway operating at LOS “E” or “F”. As shown in the comparison, both ramps have a change in delay greater than 2 minutes however, the freeway operates at an acceptable LOS. Therefore, no impacts would occur. **Table 13-9** shows the Year 2030 with and without project comparison. As shown in the comparison, both ramps have a change in delay greater than 2 minutes however, the freeway operates at an acceptable LOS. Therefore, no impacts would occur.

Freeway main lane segments have been evaluated utilizing Caltrans District 11 procedures accepted by the City of San Diego. In future conditions, the ongoing I-15 managed lanes project is assumed to be

completed. This project will include the addition of two managed lanes in the median (in addition to the existing managed lanes) with an extra general purpose lane in certain areas. The project is fully funded and under construction. This project is expected to significantly improve freeway operation. **Tables 13-10** thru **13-15** show the results of this analysis. As shown on **Tables 13-16** thru **13-18**, no freeway impacts are anticipated.

TABLE 13-1

Existing Ramp Meter Analysis

Location		Demand (Veh/Hr)	Demand per lane ¹ (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)
Mercy Road/ I-15 SB On Ramp- 2-SOV	AM	1200	489	420	69	9.86	2,001
	PM	1340	590	406	184	27.19	5,336
Mercy Road / I-15 SB On Ramp- 1-HOV	AM	1200	237	420	0	0.00	0
	PM	1340	219	406	0	0.00	0
Scripps Poway Pkwy. / I-15 NB On Ramp- 2-SOV	AM	Ramp Meter is not turned on in this Peak					
	PM	994	420	270	150	33.33	4,350
Scripps Poway Pkwy. / I-15 NB On Ramp- 1-HOV	AM	Ramp Meter is not turned on in this Peak					
	PM	994	167	270	0	0.00	0

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

¹= the critical lane is used for ramps with multiple lanes

Veh/Hr= Vehicles per hour

Veh/Hr/Ln= Vehicles per hour per lane

Observed

Location		Ramp Meter Lanes	Maximum Observed Delay (Min)	Maximum Observed Queue (Feet)
Mercy Road / I-15 SB On Ramp	AM	2-SOV/ 1-HOV	3.0	750
	PM		2.5	650
Scripps Poway Pkwy. / I-15 NB On Ramp	AM	2-SOV/ 1-HOV	Not Turned On	
	PM		1.5	400

NOTE:

SOV = Single Occupancy Vehicle Lane

HOV = High Occupancy Vehicle Lane

TABLE 13-2
Existing with Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Demand (Veh/Hr)	Demand per lane ¹ (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)	
Mercy Road/ I-15 SB On Ramp- 2-SOV	AM	1237	504	420	84	12.01	2,438	
	PM	1598	704	406	298	43.98	8,630	
Mercy Road / I-15 SB On Ramp- 1-HOV	AM	1237	244	420	0	0.00	0	
	PM	1598	261	406	0	0.00	0	
Scripps Poway Pkwy. / I-15 NB On Ramp- 2-SOV	AM	Ramp Meter is not turned on in this Peak						
	PM	1145	484	270	214	47.51	6,200	
Scripps Poway Pkwy. / I-15 NB On Ramp- 1-HOV	AM	Ramp Meter is not turned on in this Peak						
	PM	1145	192	270	0	0.00	0	

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV= Single Occupancy Vehicles

HOV= High Occupancy Vehicles

Veh/Hr= Vehicles per hour

Veh/Hr/Ln= Vehicles per hour per lane

¹= the critical lane is used for ramps with multiple lanes

TABLE 13-3

Near Term Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Demand (Veh/Hr)	Demand per lane ¹ (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)	
Mercy Road/ I-15 SB On Ramp- 2-SOV	AM	1214	495	420	75	10.67	2,166	
	PM	1356	597	406	191	28.23	5,540	
Mercy Road / I-15 SB On Ramp- 1-HOV	AM	1214	240	420	0	0.00	0	
	PM	1356	222	406	0	0.00	0	
Scripps Poway Pkwy. / I-15 NB On Ramp- 2-SOV	AM	Ramp Meter is not turned on in this Peak						
	PM	1000	423	270	153	33.90	4,424	
Scripps Poway Pkwy. / I-15 NB On Ramp- 1-HOV	AM	Ramp Meter is not turned on in this Peak						
	PM	1000	168	270	0	0.00	0	

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

Veh/Hr= Vehicles per hour

Veh/Hr/Ln= Vehicles per hour per lane

¹= the critical lane is used for ramps with multiple lanes

TABLE 13-4

Near Term With Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Demand (Veh/Hr)	Demand per lane ¹ (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)	
Mercy Road/ I-15 SB On Ramp- 2-SOV	AM	1251	510	420	90	12.83	2,604	
	PM	1614	711	406	305	45.02	8,835	
Mercy Road / I-15 SB On Ramp- 1-HOV	AM	1251	247	420	0	0.00	0	
	PM	1614	264	406	0	0.00	0	
Scripps Poway Pkwy. / I-15 NB On Ramp- 2-SOV	AM	Ramp Meter is not turned on in this Peak						
	PM	1151	486	270	216	48.08	6,274	
Scripps Poway Pkwy. / I-15 NB On Ramp- 1-HOV	AM	Ramp Meter is not turned on in this Peak						
	PM	1151	193	270	0	0.00	0	

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

Veh/Hr= Vehicles per hour

Veh/Hr/Ln= Vehicles per hour per lane

¹ = the critical lane is used for ramps with multiple lanes

TABLE 13-5

Horizon Year 2030 Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Demand (Veh/Hr)	Demand per lane ¹ (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)	
Mercy Road/ I-15 SB On Ramp- 2-SOV	AM	1846	752	420	332	47.46	9,635	
	PM	2062	908	406	502	74.17	14,555	
Mercy Road / I-15 SB On Ramp- 1-HOV	AM	1846	365	420	0	0.00	0	
	PM	2062	337	406	0	0.00	0	
Scripps Poway Pkwy. / I-15 NB On Ramp- 2-SOV	AM	Ramp Meter is not turned on in this Peak						
	PM	1465	619	270	349	77.56	10,121	
Scripps Poway Pkwy. / I-15 NB On Ramp- 1-HOV	AM	Ramp Meter is not turned on in this Peak						
	PM	1465	246	270	0	0.00	0	

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

Veh/Hr= Vehicles per hour

Veh/Hr/Ln= Vehicles per hour per lane

¹= the critical lane is used for ramps with multiple lanes

TABLE 13-6

Horizon Year 2030 With Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Demand (Veh/Hr)	Demand per lane ¹ (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)	
Mercy Road/ I-15 SB On Ramp- 2-SOV	AM	1883	767	420	347	49.62	10,072	
	PM	2320	1021	406	615	90.96	17,849	
Mercy Road / I-15 SB On Ramp- 1-HOV	AM	1883	372	420	0	0.00	0	
	PM	2320	379	406	0	0.00	0	
Scripps Poway Pkwy. / I-15 NB On Ramp- 2-SOV	AM	Ramp Meter is not turned on in this Peak						
	PM	1616	683	270	413	91.74	11,972	
Scripps Poway Pkwy. / I-15 NB On Ramp- 1-HOV	AM	Ramp Meter is not turned on in this Peak						
	PM	1616	271	270	1	0.33	43	

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

Veh/Hr= Vehicles per hour

Veh/Hr/Ln= Vehicles per hour per lane

¹ = the critical lane is used for ramps with multiple lanes

TABLE 13-7

Existing With & Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Existing Without Project		Existing With Project		Freeway LOS*	∇	S	
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)				
Mercy Road / I-15 SB On Ramp (2-SOV)	AM	9.86	2,001	12.01	2,438	D	2.15	NO	
	PM	27.19	5,336	43.98	8,630	D	16.79	NO	
Mercy Road / I-15 SB On Ramp (1-HOV)	AM	0.00	0	0.00	0	D	0.00	NO	
	PM	0.00	0	0.00	0	D	0.00	NO	
Scripps Poway Pkwy. / I-15 NB On Ramp (2-SOV)	AM	Ramp Meter is not turned on in this Peak							
	PM	33.33	4,350	47.51	6,200	C	14.18	NO	
Scripps Poway Pkwy. / I-15 NB On Ramp (1-HOV)	AM	Ramp Meter is not turned on in this Peak							
	PM	0.00	0	0.00	0	C	0.00	NO	

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes and freeway LOS E and ramp delay is 15 minutes or more

S = Significant, if change in delay is greater than 1 minutes and freeway LOS F and ramp delay is 15 minutes or more

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

*=taken from Table 1-10

The highest per lane demand is used in delay and queue calculations

TABLE 13-8

Near Term With & Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Near Term Without Project		Near Term With Project		Freeway LOS*	∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)			
Mercy Road / I-15 SB On Ramp (2-SOV)	AM	10.67	2,166	12.83	2,604	D	2.15	NO
	PM	28.23	5,540	45.02	8,835	D	16.79	NO
Mercy Road / I-15 SB On Ramp (1-HOV)	AM	0.00	0	0.00	0	D	0.00	NO
	PM	0.00	0	0.00	0	D	0.00	NO
Scripps Poway Pkwy. / I-15 NB On Ramp (2-SOV)	AM	Ramp Meter is not turned on in this Peak						
	PM	33.90	4,424	48.08	6,274	C	14.18	NO
Scripps Poway Pkwy. / I-15 NB On Ramp (1-HOV)	AM	Ramp Meter is not turned on in this Peak						
	PM	0.00	0	0.00	0	C	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes and freeway LOS E and ramp delay is 15 minutes or more

S = Significant, if change in delay is greater than 1 minutes and freeway LOS F and ramp delay is 15 minutes or more

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

*=taken from Table 1-11

The highest per lane demand is used in delay and queue calculations

TABLE 13-9

Horizon Year 2030 With & Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Year 2030 Without Project		Year 2030 With Project		Freeway LOS*	Δ	S	
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)				
Mercy Road / I-15 SB On Ramp (2-SOV)	AM	47.46	9,635	49.62	10,072	D	2.15	NO	
	PM	74.17	14,555	90.96	17,849	D	16.79	NO	
Mercy Road / I-15 SB On Ramp (1-HOV)	AM	0.00	0	0.00	0	D	0.00	NO	
	PM	0.00	0	0.00	0	D	0.00	NO	
Scripps Poway Pkwy. / I-15 NB On Ramp (2-SOV)	AM	Ramp Meter is not turned on in this Peak							
	PM	77.56	10,121	91.74	11,972	D	14.18	NO	
Scripps Poway Pkwy. / I-15 NB On Ramp (1-HOV)	AM	Ramp Meter is not turned on in this Peak							
	PM	0.00	0	0.33	43	D	0.33	NO	

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes and freeway LOS E and ramp delay is 15 minutes or more

S = Significant, if change in delay is greater than 1 minutes and freeway LOS F and ramp delay is 15 minutes or more

SOV = Single Occupancy Vehicles

HOV = High Occupancy Vehicles

*=taken from Table 1-12

The highest per lane demand is used in delay and queue calculations

TABLE 13-10

Existing Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT*	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
SR-163/SR-52	5-GP	NB	11,750	176,000	0.075	0.55	7,314	0.622	C
SR-163/SR-52	5-GP	SB	11,750	176,000	0.081	0.53	7,534	0.641	C
Miramar Road/ SR-163	7-GP+2-M	NB	19,810	296,000	0.075	0.55	12,301	0.621	C
Miramar Road/ SR-163	7-GP+2-M	SB	19,810	296,000	0.081	0.53	12,670	0.640	C
Caroll Canyon Road/Miramar Road	5-GP+2-M	NB	15,110	275,000	0.075	0.55	11,428	0.756	C
Caroll Canyon Road/Miramar Road	5-GP+2-M	SB	15,110	275,000	0.081	0.53	11,771	0.779	C
Carroll Canyon Road/ Mira Mesa Blvd.	5-GP+2-M	NB	15,110	257,000	0.075	0.55	10,680	0.707	C
Carroll Canyon Road/ Mira Mesa Blvd.	5-GP+2-M	SB	15,110	257,000	0.083	0.57	12,178	0.806	D
Mira Mesa Blvd./ Scripps Poway Pkwy.	5-GP+2-M	NB	15,110	248,000	0.081	0.53	10,534	0.697	C
Mira Mesa Blvd./ Scripps Poway Pkwy.	5-GP+2-M	SB	15,110	248,000	0.082	0.58	11,760	0.778	C
Scripps Poway Pkwy./Poway Road	5-GP+2-M	NB	15,110	236,000	0.081	0.53	10,024	0.663	C
Scripps Poway Pkwy./Poway Road	5-GP+2-M	SB	15,110	236,000	0.082	0.58	11,191	0.741	C
Poway Road/ SR-56	5-GP+2-M	NB	15,110	208,000	0.077	0.52	8,393	0.555	B
Poway Road/ SR-56	5-GP+2-M	SB	15,110	208,000	0.078	0.57	9,311	0.616	B
SR-56/ Carmel Mountain Road	5-GP+4-M	NB	18,470	225,000	0.077	0.52	9,079	0.492	B
SR-56/ Carmel Mountain Road	5-GP+4-M	SB	18,470	225,000	0.078	0.57	10,072	0.545	B
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	NB	18,470	213,000	0.077	0.52	8,595	0.465	B
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	SB	18,470	213,000	0.078	0.57	9,535	0.516	B
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	NB	18,470	209,000	0.077	0.52	8,433	0.457	B
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	SB	18,470	209,000	0.078	0.57	9,356	0.507	B

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes
 *Caltrans 2010 Count Data

TABLE 13-11

Existing With Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
SR-163/SR-52	5-GP	NB	11,750	177,484	0.075	0.55	7,376	0.628	C
SR-163/SR-52	5-GP	SB	11,750	177,484	0.081	0.53	7,597	0.647	C
Miramar Road/ SR-163	7-GP+2-M	NB	19,810	298,597	0.075	0.55	12,409	0.626	C
Miramar Road/ SR-163	7-GP+2-M	SB	19,810	298,597	0.081	0.53	12,781	0.645	C
Carroll Canyon Road/Miramar Road	5-GP+2-M	NB	15,110	278,339	0.075	0.55	11,567	0.766	C
Carroll Canyon Road/Miramar Road	5-GP+2-M	SB	15,110	278,339	0.081	0.53	11,914	0.788	C
Carroll Canyon Road/ Mira Mesa Blvd.	5-GP+2-M	NB	15,110	260,896	0.075	0.55	10,842	0.718	C
Carroll Canyon Road/ Mira Mesa Blvd.	5-GP+2-M	SB	15,110	260,896	0.083	0.57	12,363	0.818	D
Mira Mesa Blvd./ Scripps Poway Pkwy.	5-GP+2-M	NB	15,110	253,380	0.081	0.53	10,763	0.712	C
Mira Mesa Blvd./ Scripps Poway Pkwy.	5-GP+2-M	SB	15,110	253,380	0.082	0.58	12,015	0.795	D
Scripps Poway Pkwy./Poway Road	5-GP+2-M	NB	15,110	239,154	0.081	0.53	10,158	0.672	C
Scripps Poway Pkwy./Poway Road	5-GP+2-M	SB	15,110	239,154	0.082	0.58	11,340	0.751	C
Poway Road/ SR-56	5-GP+2-M	NB	15,110	211,339	0.077	0.52	8,528	0.564	B
Poway Road/ SR-56	5-GP+2-M	SB	15,110	211,339	0.078	0.57	9,461	0.626	C
SR-56/ Carmel Mountain Road	5-GP+4-M	NB	18,470	227,041	0.077	0.52	9,161	0.496	B
SR-56/ Carmel Mountain Road	5-GP+4-M	SB	18,470	227,041	0.078	0.57	10,164	0.550	B
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	NB	18,470	214,670	0.077	0.52	8,662	0.469	B
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	SB	18,470	214,670	0.078	0.57	9,610	0.520	B
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	NB	18,470	210,299	0.077	0.52	8,486	0.459	B
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	SB	18,470	210,299	0.078	0.57	9,414	0.510	B

Legend:

Dir.= Direction
Cap. = Capacity
ADT= Average Daily Traffic
V/C= Volume to Capacity Ratio
LOS= Level of Service
PHV= Peak Hour Volume
#-GP= # of General Purpose Lanes
#-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 13-12

Near Term Without Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
SR-163/SR-52	5-GP	NB	11,750	177,557	0.075	0.55	7,379	0.628	C
SR-163/SR-52	5-GP	SB	11,750	177,557	0.081	0.53	7,600	0.647	C
Miramar Road/ SR-163	7-GP+2-M	NB	19,810	298,550	0.075	0.55	12,407	0.626	C
Miramar Road/ SR-163	7-GP+2-M	SB	19,810	298,550	0.081	0.53	12,779	0.645	C
Carroll Canyon Road/Miramar Road	5-GP+2-M	NB	15,110	277,646	0.075	0.55	11,538	0.764	C
Carroll Canyon Road/Miramar Road	5-GP+2-M	SB	15,110	277,646	0.081	0.53	11,884	0.787	C
Carroll Canyon Road/ Mira Mesa Blvd.	5-GP+2-M	NB	15,110	259,743	0.075	0.55	10,794	0.714	C
Carroll Canyon Road/ Mira Mesa Blvd.	5-GP+2-M	SB	15,110	259,743	0.083	0.57	12,308	0.815	D
Mira Mesa Blvd./ Scripps Poway Pkwy.	5-GP+2-M	NB	15,110	250,981	0.081	0.53	10,661	0.706	C
Mira Mesa Blvd./ Scripps Poway Pkwy.	5-GP+2-M	SB	15,110	250,981	0.082	0.58	11,901	0.788	C
Scripps Poway Pkwy./Poway Road	5-GP+2-M	NB	15,110	237,372	0.081	0.53	10,083	0.667	C
Scripps Poway Pkwy./Poway Road	5-GP+2-M	SB	15,110	237,372	0.082	0.58	11,256	0.745	C
Poway Road/ SR-56	5-GP+2-M	NB	15,110	209,327	0.077	0.52	8,446	0.559	B
Poway Road/ SR-56	5-GP+2-M	SB	15,110	209,327	0.078	0.57	9,371	0.620	C
SR-56/ Carmel Mountain Road	5-GP+4-M	NB	18,470	225,944	0.077	0.52	9,117	0.494	B
SR-56/ Carmel Mountain Road	5-GP+4-M	SB	18,470	225,944	0.078	0.57	10,115	0.548	B
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	NB	18,470	213,835	0.077	0.52	8,628	0.467	B
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	SB	18,470	213,835	0.078	0.57	9,573	0.518	B
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	NB	18,470	209,648	0.077	0.52	8,459	0.458	B
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	SB	18,470	209,648	0.078	0.57	9,385	0.508	B

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 13-13

Near Term With Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
SR-163/SR-52	5-GP	NB	11,750	179,041	0.075	0.55	7,440	0.633	C
SR-163/SR-52	5-GP	SB	11,750	179,041	0.081	0.53	7,664	0.652	C
Miramar Road/ SR-163	7-GP+2-M	NB	19,810	301,147	0.075	0.55	12,515	0.632	C
Miramar Road/ SR-163	7-GP+2-M	SB	19,810	301,147	0.081	0.53	12,890	0.651	C
Carroll Canyon Road/Miramar Road	5-GP+2-M	NB	15,110	280,985	0.075	0.55	11,677	0.773	C
Carroll Canyon Road/Miramar Road	5-GP+2-M	SB	15,110	280,985	0.081	0.53	12,027	0.796	D
Carroll Canyon Road/ Mira Mesa Blvd.	5-GP+2-M	NB	15,110	263,639	0.075	0.55	10,956	0.725	C
Carroll Canyon Road/ Mira Mesa Blvd.	5-GP+2-M	SB	15,110	263,639	0.083	0.57	12,493	0.827	D
Mira Mesa Blvd./ Scripps Poway Pkwy.	5-GP+2-M	NB	15,110	256,361	0.081	0.53	10,889	0.721	C
Mira Mesa Blvd./ Scripps Poway Pkwy.	5-GP+2-M	SB	15,110	256,361	0.082	0.58	12,156	0.805	D
Scripps Poway Pkwy./Poway Road	5-GP+2-M	NB	15,110	240,526	0.081	0.53	10,217	0.676	C
Scripps Poway Pkwy./Poway Road	5-GP+2-M	SB	15,110	240,526	0.082	0.58	11,405	0.755	C
Poway Road/ SR-56	5-GP+2-M	NB	15,110	212,666	0.077	0.52	8,581	0.568	B
Poway Road/ SR-56	5-GP+2-M	SB	15,110	212,666	0.078	0.57	9,520	0.630	C
SR-56/ Carmel Mountain Road	5-GP+4-M	NB	18,470	227,985	0.077	0.52	9,199	0.498	B
SR-56/ Carmel Mountain Road	5-GP+4-M	SB	18,470	227,985	0.078	0.57	10,206	0.553	B
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	NB	18,470	215,505	0.077	0.52	8,696	0.471	B
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	SB	18,470	215,505	0.078	0.57	9,647	0.522	B
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	NB	18,470	210,947	0.077	0.52	8,512	0.461	B
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	SB	18,470	210,947	0.078	0.57	9,443	0.511	B

Legend:

Dir.= Direction
Cap. = Capacity
ADT= Average Daily Traffic
V/C= Volume to Capacity Ratio
LOS= Level of Service
PHV= Peak Hour Volume
#-GP= # of General Purpose Lanes
#-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 13-14

Horizon Year 2030 Without Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
SR-163/SR-52	6-GP	NB	14,100	261,516	0.075	0.55	10,868	0.771	C
SR-163/SR-52	5-GP	SB	11,750	261,516	0.081	0.53	11,194	0.953	E
Miramar Road/ SR-163	7-GP+4-M	NB	23,170	409,403	0.075	0.55	17,014	0.734	C
Miramar Road/ SR-163	7-GP+4-M	SB	23,170	409,403	0.081	0.53	17,524	0.756	C
Carroll Canyon Road/Miramar Road	7-GP+4-M	NB	23,170	385,661	0.075	0.55	16,027	0.692	C
Carroll Canyon Road/Miramar Road	7-GP+4-M	SB	23,170	385,661	0.081	0.53	16,508	0.712	C
Carroll Canyon Road/ Mira Mesa Blvd.	6-GP+4-M	NB	20,820	378,104	0.075	0.55	15,713	0.755	C
Carroll Canyon Road/ Mira Mesa Blvd.	6-GP+4-M	SB	20,820	378,104	0.083	0.57	17,917	0.861	D
Mira Mesa Blvd./ Scripps Poway Pkwy.	6-GP+4-M	NB	20,820	381,620	0.081	0.53	16,210	0.779	C
Mira Mesa Blvd./ Scripps Poway Pkwy.	6-GP+4-M	SB	20,820	381,620	0.082	0.58	18,096	0.869	D
Scripps Poway Pkwy./Poway Road	5-GP+4-M	NB	18,470	347,846	0.081	0.53	14,775	0.800	D
Scripps Poway Pkwy./Poway Road	5-GP+4-M	SB	18,470	347,846	0.082	0.58	16,494	0.893	D
Poway Road/ SR-56	5-GP+4-M	NB	18,470	319,661	0.077	0.52	12,898	0.698	C
Poway Road/ SR-56	5-GP+4-M	SB	18,470	319,661	0.078	0.57	14,310	0.775	C
SR-56/ Carmel Mountain Road	5-GP+4-M	NB	18,470	334,959	0.077	0.52	13,516	0.732	C
SR-56/ Carmel Mountain Road	5-GP+4-M	SB	18,470	334,959	0.078	0.57	14,995	0.812	D
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	NB	18,470	323,330	0.077	0.52	13,047	0.706	C
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	SB	18,470	323,330	0.078	0.57	14,474	0.784	C
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	NB	18,470	324,701	0.077	0.52	13,102	0.709	C
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	SB	18,470	324,701	0.078	0.57	14,536	0.787	C

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 13-15

Horizon Year 2030 With Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT*	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
SR-163/SR-52	6-GP	NB	14,100	263,000	0.075	0.55	10,930	0.775	C
SR-163/SR-52	5-GP	SB	11,750	263,000	0.081	0.53	11,258	0.958	E
Miramar Road/ SR-163	7-GP+4-M	NB	23,170	412,000	0.075	0.55	17,122	0.739	C
Miramar Road/ SR-163	7-GP+4-M	SB	23,170	412,000	0.081	0.53	17,635	0.761	C
Carroll Canyon Road/Miramar Road	7-GP+4-M	NB	23,170	389,000	0.075	0.55	16,166	0.698	C
Carroll Canyon Road/Miramar Road	7-GP+4-M	SB	23,170	389,000	0.081	0.53	16,651	0.719	C
Carroll Canyon Road/ Mira Mesa Blvd.	6-GP+4-M	NB	20,820	382,000	0.075	0.55	15,875	0.762	C
Carroll Canyon Road/ Mira Mesa Blvd.	6-GP+4-M	SB	20,820	382,000	0.083	0.57	18,102	0.869	D
Mira Mesa Blvd./ Scripps Poway Pkwy.	6-GP+4-M	NB	20,820	387,000	0.081	0.53	16,438	0.790	C
Mira Mesa Blvd./ Scripps Poway Pkwy.	6-GP+4-M	SB	20,820	387,000	0.082	0.58	18,351	0.881	D
Scripps Poway Pkwy./Poway Road	5-GP+4-M	NB	18,470	351,000	0.081	0.53	14,909	0.807	D
Scripps Poway Pkwy./Poway Road	5-GP+4-M	SB	18,470	351,000	0.082	0.58	16,644	0.901	D
Poway Road/ SR-56	5-GP+4-M	NB	18,470	323,000	0.077	0.52	13,033	0.706	C
Poway Road/ SR-56	5-GP+4-M	SB	18,470	323,000	0.078	0.57	14,460	0.783	C
SR-56/ Carmel Mountain Road	5-GP+4-M	NB	18,470	337,000	0.077	0.52	13,598	0.736	C
SR-56/ Carmel Mountain Road	5-GP+4-M	SB	18,470	337,000	0.078	0.57	15,086	0.817	D
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	NB	18,470	325,000	0.077	0.52	13,114	0.710	C
Carmel Mountain Road/ Camino Del Norte	5-GP+4-M	SB	18,470	325,000	0.078	0.57	14,549	0.788	C
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	NB	18,470	326,000	0.077	0.52	13,154	0.712	C
Camino Del Norte/ Rancho Bernardo Road	5-GP+4-M	SB	18,470	326,000	0.078	0.57	14,594	0.790	D

Legend:

Dir.= Direction
Cap. = Capacity
ADT= Average Daily Traffic
V/C= Volume to Capacity Ratio
LOS= Level of Service
PHV= Peak Hour Volume
#-GP= # of General Purpose Lanes
#-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

*SANDAG Traffic Forecast Information Center Year 2030 Volume

TABLE 13-16

Existing With & Without Project Freeway Segment LOS Summary

Segment	Dir.	Capacity	# of Lanes	Peak Hour %	Dir. Split	Existing				Existing with Project				Δ	Sig.?
						Vol.	PHV	V/C	LOS	Vol.	PHV	V/C	LOS		
I-15															
SR-163/SR-52	NB	11,750	5-GP	0.075	0.55	176,000	7,314	0.622	C	177,484	7,376	0.628	C	0.006	NO
SR-163/SR-52	SB	11,750	5-GP	0.081	0.53	176,000	7,534	0.641	C	177,484	7,597	0.647	C	0.006	NO
Miramar Road/ SR-163	NB	19,810	7-GP+2-M	0.075	0.55	296,000	12,301	0.621	C	298,597	12,409	0.626	C	0.005	NO
Miramar Road/ SR-163	SB	19,810	7-GP+2-M	0.081	0.53	296,000	12,670	0.640	C	298,597	12,781	0.645	C	0.006	NO
Carroll Canyon Road/Miramar Road	NB	15,110	5-GP+2-M	0.075	0.55	275,000	11,428	0.756	C	278,339	11,567	0.764	C	0.007	NO
Carroll Canyon Road/Miramar Road	SB	15,110	5-GP+2-M	0.081	0.53	275,000	11,771	0.779	C	278,339	11,914	0.787	C	0.007	NO
Carroll Canyon Road/ Mira Mesa Blvd.	NB	15,110	5-GP+2-M	0.075	0.55	257,000	10,680	0.707	C	260,896	10,842	0.714	C	0.008	NO
Carroll Canyon Road/ Mira Mesa Blvd.	SB	15,110	5-GP+2-M	0.083	0.57	257,000	12,178	0.806	D	260,896	12,363	0.815	D	0.009	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	NB	15,110	5-GP+2-M	0.081	0.53	248,000	10,534	0.697	C	253,380	10,763	0.706	C	0.008	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	SB	15,110	5-GP+2-M	0.082	0.58	248,000	11,760	0.778	C	253,380	12,015	0.788	D	0.009	NO
Scripps Poway Pkwy./Poway Road	NB	15,110	5-GP+2-M	0.081	0.53	236,000	10,024	0.663	C	239,154	10,158	0.667	C	0.004	NO
Scripps Poway Pkwy./Poway Road	SB	15,110	5-GP+2-M	0.082	0.58	236,000	11,191	0.741	C	239,154	11,340	0.745	C	0.004	NO
Poway Road/ SR-56	NB	15,110	5-GP+2-M	0.077	0.52	208,000	8,393	0.555	B	211,339	8,528	0.559	B	0.004	NO
Poway Road/ SR-56	SB	15,110	5-GP+2-M	0.078	0.57	208,000	9,311	0.616	B	211,339	9,461	0.620	C	0.004	NO
SR-56/ Carmel Mountain Road	NB	18,470	5-GP+4-M	0.077	0.52	225,000	9,079	0.492	B	227,041	9,161	0.494	B	0.002	NO
SR-56/ Carmel Mountain Road	SB	18,470	5-GP+4-M	0.078	0.57	225,000	10,072	0.545	B	227,041	10,164	0.548	B	0.002	NO
Carmel Mountain Road/ Camino Del Norte	NB	18,470	5-GP+4-M	0.077	0.52	213,000	8,595	0.465	B	214,670	8,662	0.467	B	0.002	NO
Carmel Mountain Road/ Camino Del Norte	SB	18,470	5-GP+4-M	0.078	0.57	213,000	9,535	0.516	B	214,670	9,610	0.518	B	0.002	NO
Camino Del Norte/ Rancho Bernardo Road	NB	18,470	5-GP+4-M	0.077	0.52	209,000	8,433	0.457	B	210,299	8,486	0.458	B	0.001	NO
Camino Del Norte/ Rancho Bernardo Road	SB	18,470	5-GP+4-M	0.078	0.57	209,000	9,356	0.507	B	210,299	9,414	0.508	B	0.002	NO

Legend:

Vol= Volume
Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

GP= General Purpose Lanes, Capacity= 2,350 vphpl
M= Managed Lanes, Capacity= 1,680 vphpl
PHV= Peak Hour Volume

TABLE 13-17

Near Term With & Without Project Freeway Segment LOS Summary

Segment	Dir.	Capacity	# of Lanes	Peak Hour %	Dir. Split	Near Term				Near Term with Project				Δ	Sig.?
						Vol.	PHV	V/C	LOS	Vol.	PHV	V/C	LOS		
I-15															
SR-163/SR-52	NB	11,750	5-GP	0.075	0.554	177,557	7,379	0.628	C	179,041	7,440	0.633	C	0.005	NO
SR-163/SR-52	SB	11,750	5-GP	0.081	0.527	177,557	7,600	0.647	C	179,041	7,664	0.652	C	0.005	NO
Miramar Road/ SR-163	NB	19,810	7-GP+2-M	0.075	0.554	298,550	12,407	0.626	C	301,147	12,515	0.632	C	0.005	NO
Miramar Road/ SR-163	SB	19,810	7-GP+2-M	0.081	0.527	298,550	12,779	0.645	C	301,147	12,890	0.651	C	0.006	NO
Carroll Canyon Road/Miramar Road	NB	15,110	5-GP+2-M	0.075	0.554	277,646	11,538	0.764	C	280,985	11,677	0.773	C	0.009	NO
Carroll Canyon Road/Miramar Road	SB	15,110	5-GP+2-M	0.081	0.527	277,646	11,884	0.787	C	280,985	12,027	0.796	D	0.009	NO
Carroll Canyon Road/ Mira Mesa Blvd.	NB	15,110	5-GP+2-M	0.075	0.554	259,743	10,794	0.714	C	263,639	10,956	0.725	C	0.011	NO
Carroll Canyon Road/ Mira Mesa Blvd.	SB	15,110	5-GP+2-M	0.083	0.572	259,743	12,308	0.815	D	263,639	12,493	0.827	D	0.012	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	NB	15,110	5-GP+2-M	0.081	0.526	250,981	10,661	0.706	C	256,361	10,889	0.721	C	0.015	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	SB	15,110	5-GP+2-M	0.082	0.581	250,981	11,901	0.788	C	256,361	12,156	0.805	D	0.017	NO
Scripps Poway Pkwy./Poway Road	NB	15,110	5-GP+2-M	0.081	0.526	237,372	10,083	0.667	C	240,526	10,217	0.676	C	0.009	NO
Scripps Poway Pkwy./Poway Road	SB	15,110	5-GP+2-M	0.082	0.581	237,372	11,256	0.745	C	240,526	11,405	0.755	C	0.010	NO
Poway Road/ SR-56	NB	15,110	5-GP+2-M	0.077	0.522	209,327	8,446	0.559	B	212,666	8,581	0.568	B	0.009	NO
Poway Road/ SR-56	SB	15,110	5-GP+2-M	0.078	0.571	209,327	9,371	0.620	C	212,666	9,520	0.630	C	0.010	NO
SR-56/ Carmel Mountain Road	NB	18,470	5-GP+4-M	0.077	0.522	225,944	9,117	0.494	B	227,985	9,199	0.498	B	0.004	NO
SR-56/ Carmel Mountain Road	SB	18,470	5-GP+4-M	0.078	0.571	225,944	10,115	0.548	B	227,985	10,206	0.553	B	0.005	NO
Carmel Mountain Road/ Camino Del Norte	NB	18,470	5-GP+4-M	0.077	0.522	213,835	8,628	0.467	B	215,505	8,696	0.471	B	0.004	NO
Carmel Mountain Road/ Camino Del Norte	SB	18,470	5-GP+4-M	0.078	0.571	213,835	9,573	0.518	B	215,505	9,647	0.522	B	0.004	NO
Camino Del Norte/ Rancho Bernardo Road	NB	18,470	5-GP+4-M	0.077	0.522	209,648	8,459	0.458	B	210,947	8,512	0.461	B	0.003	NO
Camino Del Norte/ Rancho Bernardo Road	SB	18,470	5-GP+4-M	0.078	0.571	209,648	9,385	0.508	B	210,947	9,443	0.511	B	0.003	NO

Legend:

Vol.= Volume
Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

GP= General Purpose Lanes, Capacity= 2,350 vphpl
M= Managed Lanes, Capacity= 1,680 vphpl
PHV= Peak Hour Volume

TABLE 13-18

Horizon Year 2030 With & Without Project Freeway Segment LOS Summary

Segment	Dir.	Capacity	# of Lanes	Peak Hour %	Dir. Split	Year 2030				Year 2030 with Project				Δ	Sig.?
						Vol.	PHV	V/C	LOS	Vol.	PHV	V/C	LOS		
I-15															
SR-163/SR-52	NB	14,100	6-GP	0.075	0.554	261,516	10,868	0.771	C	263,000	10,930	0.775	C	0.004	NO
SR-163/SR-52	SB	11,750	5-GP	0.081	0.527	261,516	11,194	0.953	E	263,000	11,258	0.958	E	0.005	NO
Miramar Road/ SR-163	NB	23,170	7-GP+4-M	0.075	0.554	409,403	17,014	0.734	C	412,000	17,122	0.739	C	0.005	NO
Miramar Road/ SR-163	SB	23,170	7-GP+4-M	0.081	0.527	409,403	17,524	0.756	C	412,000	17,635	0.761	C	0.005	NO
Carroll Canyon Road/Miramar Road	NB	23,170	7-GP+4-M	0.075	0.554	385,661	16,027	0.692	C	389,000	16,166	0.698	C	0.006	NO
Carroll Canyon Road/Miramar Road	SB	23,170	7-GP+4-M	0.081	0.527	385,661	16,508	0.712	C	389,000	16,651	0.719	C	0.006	NO
Carroll Canyon Road/ Mira Mesa Blvd.	NB	20,820	6-GP+4-M	0.075	0.554	378,104	15,713	0.755	C	382,000	15,875	0.762	C	0.008	NO
Carroll Canyon Road/ Mira Mesa Blvd.	SB	20,820	6-GP+4-M	0.083	0.572	378,104	17,917	0.861	D	382,000	18,102	0.869	D	0.009	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	NB	20,820	6-GP+4-M	0.081	0.526	381,620	16,210	0.779	C	387,000	16,438	0.790	C	0.011	NO
Mira Mesa Blvd./ Scripps Poway Pkwy.	SB	20,820	6-GP+4-M	0.082	0.581	381,620	18,096	0.869	D	387,000	18,351	0.881	D	0.012	NO
Scripps Poway Pkwy./Poway Road	NB	18,470	5-GP+4-M	0.081	0.526	347,846	14,775	0.800	D	351,000	14,909	0.807	D	0.007	NO
Scripps Poway Pkwy./Poway Road	SB	18,470	5-GP+4-M	0.082	0.581	347,846	16,494	0.893	D	351,000	16,644	0.901	D	0.008	NO
Poway Road/ SR-56	NB	18,470	5-GP+4-M	0.077	0.522	319,661	12,898	0.698	C	323,000	13,033	0.706	C	0.007	NO
Poway Road/ SR-56	SB	18,470	5-GP+4-M	0.078	0.571	319,661	14,310	0.775	C	323,000	14,460	0.783	C	0.008	NO
SR-56/ Carmel Mountain Road	NB	18,470	5-GP+4-M	0.077	0.522	334,959	13,516	0.732	C	337,000	13,598	0.736	C	0.004	NO
SR-56/ Carmel Mountain Road	SB	18,470	5-GP+4-M	0.078	0.571	334,959	14,995	0.812	D	337,000	15,086	0.817	D	0.005	NO
Carmel Mountain Road/ Camino Del Norte	NB	18,470	5-GP+4-M	0.077	0.522	323,330	13,047	0.706	C	325,000	13,114	0.710	C	0.004	NO
Carmel Mountain Road/ Camino Del Norte	SB	18,470	5-GP+4-M	0.078	0.571	323,330	14,474	0.784	C	325,000	14,549	0.788	C	0.004	NO
Camino Del Norte/ Rancho Bernardo Road	NB	18,470	5-GP+4-M	0.077	0.522	324,701	13,102	0.709	C	326,000	13,154	0.712	C	0.003	NO
Camino Del Norte/ Rancho Bernardo Road	SB	18,470	5-GP+4-M	0.078	0.571	324,701	14,536	0.787	C	326,000	14,594	0.790	D	0.003	NO

Legend:

Vol.= Volume
Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

GP= General Purpose Lanes, Capacity= 2,350 vphpl
M= Managed Lanes, Capacity= 1,680 vphpl
PHV= Peak Hour Volume

14.0 CONCLUSIONS AND RECOMMENDATIONS

14.1 PROJECT TRIP GENERATION

The Watermark project is expected to generate a maximum of 21,509 average daily driveway vehicle trips with 648 AM peak hour total trips (501 inbound/148 outbound) and 2,003 PM peak hour total trips (978 inbound/ 1,025 outbound).

14.2 EXISTING CONDITIONS

Street Segments:

All street segments are expected to operate at an acceptable level of service in the Existing condition except for the following locations:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Scripps Poway Pkwy.	I-15 NB Ramps/ Scripps Highland Drive	E
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Drive	E
Scripps Poway Pkwy.	Scripps Creek Dr./ Cypress Canyon Rd.	E

Intersections:

All intersections are expected to operate at level of service “D” or better in the Existing condition.

Freeway Segments:

As discussed in Section 13.0, all freeway segments are expected to operate at an acceptable level of service in the existing condition.

Ramp Meters:

As shown in Section 13.0, all ramp meters are expected to operate with more than 15 minute delay. However, they are not significantly impacted due to freeways operating acceptably

14.3 EXISTING WITH PROJECT

When project traffic is added to existing traffic, the following results occur.

Street Segments:

All street segments are anticipated to operate at an acceptable level of service in the Existing with Project scenario except the following segments:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Scripps Poway Pkwy.	I-15 NB / Scripps Highland Dr.	F
Scripps Poway Pkwy.	Scripps Highland Dr. / Scripps Summit Dr.	E
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Drive	F
Scripps Poway Pkwy.	Scripps Creek Dr. / Cypress Canyon Road	E
Scripps Poway Pkwy.	Cypress Canyon Road/ Angelique Street	E

Intersections:

All intersections are projected to operate at an acceptable level of service in this condition with the project and without any mitigation assumed.

Freeway Segments:

As discussed in Section 13.0, all freeway segments are expected to operate at an acceptable level of service in the existing condition.

Ramp Meters:

As shown in Section 13.0, all ramp meters are expected to operate with more than 15 minute delay. However, they are not significantly impacted due to freeways operating acceptably

14.4 NEAR TERM WITHOUT PROJECT

When “other” project traffic is added to existing traffic, the following results occur.

Street Segments:

All street segments are anticipated to operate at an acceptable level of service in the Near Term Without Project scenario except the following segments:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Scripps Poway Pkwy.	I-15 NB / Scripps Highland Dr.	E
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Drive	E
Scripps Poway Pkwy.	Scripps Creek Dr. / Cypress Canyon Road	E
Scripps Poway Pkwy.	Cypress Canyon Road/ Angelique Street	E

Intersections:

All intersections are projected to operate at an acceptable level of service in this condition without the project and without any mitigation assumed.

Freeway Segments:

As discussed in Section 13.0, all freeway segments are expected to operate at an acceptable level of service in the existing condition.

Ramp Meters:

As shown in Section 13.0, both ramp meters are expected to operate with more than 15 minutes delay, however, they are not significantly impacted due to freeways operating acceptably.

14.5 NEAR TERM WITH PROJECT

When the existing plus the “other” projects plus the proposed project is added, the following results occur.

Street Segments:

All street segments are projected to operate at acceptable levels of service in the Near Term With Project condition except the following segments:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Scripps Poway Pkwy.	I-15 NB / Scripps Highland Dr.	F
Scripps Poway Pkwy.	Scripps Highland Dr. / Scripps Summit Dr.	E
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Drive	F
Scripps Poway Pkwy.	Scripps Creek Dr. / Cypress Canyon Road	E
Scripps Poway Pkwy.	Cypress Canyon Road/ Angelique Street	E

Intersections:

All intersections are projected to operate at an acceptable level of service in this condition with the project and without any mitigation assumed except for the following intersections.

	<u>AM Peak Hour</u>	<u>PM Peak Hour</u>
Mercy Road / I-15 SB Ramps	LOS D	LOS E
Scripps Poway Parkway / Scripps Highlands Dr.	LOS C	LOS F

Freeway Segments:

As discussed in Section 13.0, all freeway segments are expected to operate at an acceptable level of service in the existing condition.

Ramp Meters:

As shown in Section 13.0, both ramp meters are expected to operate with more than 15 minute delay, however, the ramp meters are not significantly impacted because the freeway segments are operating at acceptable levels of service.

DIRECT IMPACTS:

Table 14-1 and **Table 14-2** shows the summary of the direct project impacts for street segments within the study area. As shown in the table, significant impacts which occur and require mitigation are identified at five (5) roadway segments and one (1) arterial segment locations shown highlighted in yellow. Mitigation for these impacts is discussed in Section 14.7. Segments with significant impacts are:

<u>Road</u>	<u>Segment</u>
Scripps Poway Pkwy.	I-15 NB / Scripps Highland Dr.
Scripps Poway Pkwy.	Scripps Highland Dr. / Scripps Summit Dr.
Scripps Poway Pkwy.	Scripps Summit Dr./ Spring Canyon Rd.
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Drive
Scripps Poway Pkwy.	Scripps Creek Dr. / Cypress Canyon Road
Scripps Poway Pkwy.	Cypress Canyon Road/ Angelique Street

TABLE 14-1

Existing With and Without Project Street Segment Significance

Road	Segment	Jurisd.	# lanes	Class.	Existing			Existing + Project			ΔV/C	Is this impact Significant?
					LOS	Volume	V/C	LOS	Volume	V/C		
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	D	30,688	0.77	D	31,616	0.79	0.023	NO
	Westview Pkwy./ Mercy Rd.	SD	6	PA	B	30,216	0.50	B	31,515	0.53	0.022	NO
	Capricorn Way/ Westview Pkwy.	SD	6	PA	B	25,599	0.43	B	26,712	0.45	0.019	NO
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	B	15,830	0.40	B	18,056	0.45	0.056	NO
	Kika Ct./ Alemania Rd.	SD	4	4-M	B	17,719	0.44	B	20,131	0.50	0.060	NO
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	C	21,056	0.53	C	23,839	0.60	0.070	NO
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	E	57,613	0.96	F	70,733	1.18	0.219	YES
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	C	49,688	0.83	E	57,431	0.96	0.129	YES
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	C	41,832	0.70	C	47,212	0.79	0.090	NO
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	E	38,992	0.97	F	41,960	1.05	0.074	YES
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	E	35,805	0.90	E	38,217	0.96	0.060	YES
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	D	34,720	0.87	E	36,761	0.92	0.051	YES
	Angelique St./ Pomerado Rd.	Poway	6	PA	C	36,008	0.60	C	37,678	0.63	0.028	NO
	Pomerado Rd./ Kirkham Rd.	Poway	6	PA	C	41,405	0.69	C	42,518	0.71	0.019	NO

Legend:

LOS= Level of Service
SD= San Diego
V/C= Volume to Capacity Ratio
ΔV/C= Change in V/C ratio
PA = 6 lane Prime Arterial
4-M = 4 Lane Major Arterial

Existing With & Without Project Arterial Significance

Road	Segment	# of Lanes	Jurisd.	Class.	Direction	Existing				Existing + Project				ΔSpeed (mph) AM	ΔSpeed (mph) PM	Is this impact Significant?
						AM		PM		AM		PM				
						Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS			
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	6	SD	PA	Eastbound	15.8	E	17.3	E	14.5	E	9.2	F	1.3	8.1	YES
						22.8	C	22.2	C	22.7	C	10.6	F	0.1	11.6	YES
	Scripps Highland Dr./ Scripps Summit Dr.	6	SD	PA	Eastbound	30.4	B	21.4	D	30	B	13.7	E	0.4	7.7	YES
						31.6	B	27.2	C	30.6	B	25.0	C	1.0	2.2	NO
	Scripps Summit Dr./ Spring Canyon Rd.	6	SD	PA	Eastbound	18.9	D	17.0	D	13.7	E	12.7	F	5.2	4.3	YES
						15.2	E	17.4	D	12.8	F	15.0	E	2.4	2.4	YES
	Spring Canyon Rd./ Scripps Creek Dr.	4	SD	4-M	Eastbound	20.1	D	21.6	D	20	D	19.8	D	0.1	1.8	NO
						25.3	C	28.0	B	23.8	C	24.6	C	1.5	3.4	NO
	Scripps Creek Dr./ Cypress Canyon Rd.	4	SD	4-M	Eastbound	24.3	C	24.0	C	24.2	C	23.1	C	0.1	0.9	NO
						23.7	C	24.8	C	23.3	C	23.7	C	0.4	1.1	NO
	Cypress Canyon Rd./ Vail Ct.	4	SD	4-M	Eastbound	28.6	B	27.4	C	28.6	B	27.2	C	0.0	0.2	NO
						31.8	B	31.3	B	31.7	B	30.8	B	0.1	0.5	NO
	Angelique St./ Pomerado Rd.	6	Poway	PA	Eastbound	28.4	B	26.4	C	28.4	B	26.2	C	0.0	0.2	NO
						26.2	C	22.5	C	26	C	20.1	D	0.2	2.4	NO
Pomerado Rd./ Kirkham Rd.	6	Poway	PA	Eastbound	43.6	A	37.7	A	43	A	37.3	A	0.6	0.4	NO	
					36.9	A	34.7	B	36.6	A	34.4	B	0.3	0.3	NO	

Legend:

LOS= Level of Service
SD= San Diego
PA = 6 lane Prime Arterial
4-M = 4 Lane Major Arterial

TABLE 14-2

Near Term With and Without Project Street Segment Significance

Road	Segment	Jurisd.	# lanes	Class.	Near Term			Near Term + Project			ΔV/C	Is this impact Significant?
					LOS	Volume	V/C	LOS	Volume	V/C		
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	D	31,737	0.79	D	32,665	0.82	0.023	NO
	Westview Pkwy./ Mercy Rd.	SD	6	PA	B	31,884	0.53	B	33,183	0.55	0.022	NO
	Capricorn Way/ Westview Pkwy.	SD	6	PA	B	25,793	0.43	B	26,906	0.45	0.019	NO
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	B	16,662	0.42	B	18,888	0.47	0.056	NO
	Kika Ct./ Alemania Rd.	SD	4	4-M	B	18,472	0.46	B	20,884	0.52	0.060	NO
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	C	21,764	0.54	C	24,547	0.61	0.070	NO
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	E	59,591	0.99	F	72,711	1.21	0.219	YES
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	D	50,855	0.85	E	58,598	0.98	0.129	YES
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	C	42,772	0.71	C	48,152	0.80	0.090	NO
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	E	39,511	0.99	F	42,479	1.06	0.074	YES
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	E	36,226	0.91	E	38,638	0.97	0.060	YES
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	E	35,077	0.88	E	37,118	0.93	0.051	YES
	Angelique St./ Pomerado Rd.	Poway	6	PA	C	36,300	0.61	C	37,970	0.63	0.028	NO
	Pomerado Rd./ Kirkham Rd.	Poway	6	PA	C	41,599	0.69	C	42,712	0.71	0.019	NO

Legend:

- LOS= Level of Service
- V/C= Volume to Capacity Ratio
- ΔV/C= Change in V/C ratio
- PA = 6 lane Prime Arterial
- 4-M = 4 Lane Major Arterial

Near Term With and Without Project Arterial Significance

Road	Segment	# of Lanes	Jurisd.	Class.	Direction	Near Term				Near Term + Project				ΔSpeed (mph) AM	ΔSpeed (mph) PM	Is this impact Significant?
						AM		PM		AM		PM				
						Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	6	SD	PA	Eastbound	15.8	E	15.6	E	16.3	E	5.1	F	-0.5	10.5	YES
						22.8	C	16.8	E	22.4	C	13.4	E	0.4	3.4	YES
	Scripps Highland Dr./ Scripps Summit Dr.	6	SD	PA	Eastbound	30.2	B	20.3	D	29.7	B	9.3	F	0.5	11.0	YES
						31.6	B	27.4	C	32.9	B	22.7	C	-1.3	4.7	NO
	Scripps Summit Dr./ Spring Canyon Rd.	6	SD	PA	Eastbound	18.8	D	14.5	E	18	D	16.2	E	0.8	-1.7	NO
						13.6	E	18.0	D	10	F	11.1	F	3.6	6.9	YES
	Spring Canyon Rd./ Scripps Creek Dr.	4	SD	4-M	Eastbound	20.1	D	21.0	D	19.9	D	26.0	C	0.2	-5.0	NO
						24.4	C	26.6	C	23.1	C	26.7	C	1.3	-0.1	NO
	Scripps Creek Dr./ Cypress Canyon Rd.	4	SD	4-M	Eastbound	24.3	C	23.7	C	24.2	C	21.7	D	0.1	2.0	NO
						23.3	C	24.8	C	22.9	C	23.3	C	0.4	1.5	NO
	Cypress Canyon Rd./ Vail Ct.	4	SD	4-M	Eastbound	28.4	B	27.3	C	28.6	B	27.0	C	-0.2	0.3	NO
						31.7	B	31.3	B	31.5	B	30.3	B	0.2	1.0	NO
	Angelique St./ Pomerado Rd.	6	Poway	PA	Eastbound	28.4	B	25.1	C	28.4	B	24.7	C	0.0	0.4	NO
						25.8	C	22.2	C	25.6	C	19.4	D	0.2	2.8	NO
	Pomerado Rd./ Kirkham Rd.	6	Poway	PA	Eastbound	43.2	A	37.7	A	42.4	A	37.1	A	0.8	0.6	NO
						36.4	A	33.3	B	36.3	A	33.1	B	0.1	0.2	NO

Legend:

- LOS= Level of Service
- PA = 6 lane Prime Arterial
- 4-M = 4 Lane Major Arterial

Table 14-3 and **Table 14-4** shows the summary of the direct project impacts on intersections within the study area. As shown in **Table 14-4**, there are two significant intersection direct impacts. These impacts occur at Mercy Road/ I-15 SB ramps and Scripps Poway Parkway/ Scripps Highland Dr. Mitigation for these two significant impacts is discussed in Section 14.7.

As shown in Section 13.0, there are no anticipated Freeway or Ramp Meter direct impacts.

14.6 CUMULATIVE IMPACTS

Street segments and intersections operating at an unacceptable level of service in these conditions were discussed in Section 9.0 & 10.0. These street segments and intersections are also shown on **Table 14-5** and **Table 14-6**. These tables summarize impacts which are expected to occur on street segments and intersections in the Year 2030 conditions. These impacts are considered Cumulative impacts.

Street segment impacts are expected to occur at the following seven (7) locations (6 roadway segments and 1 arterial segment):

<u>Road</u>	<u>Segment</u>
Scripps Poway Pkwy.	I-15 NB / Scripps Highland Dr.
Scripps Poway Pkwy.	Scripps Highland Dr. / Scripps Summit Dr.
Scripps Poway Pkwy.	Scripps Summit Dr./ Spring Canyon Rd.
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Drive
Scripps Poway Pkwy.	Scripps Creek Dr. / Cypress Canyon Road
Scripps Poway Pkwy.	Cypress Canyon Road/ Angelique Street
Scripps Poway Pkwy.	Angelique Street/ Pomerado Road

TABLE 14-3

Existing With and Without Project Intersection Summary

#	Intersection	Existing				Existing With Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Park Village Rd. / Black Mountain Rd.	39.0	D	42.9	D	51.4	D	12.4	No	44.0	D	1.1	No
2	Mercy Rd. / Black Mountain Rd.	31.6	C	32.5	C	33.6	C	2.0	No	34.6	C	2.1	No
3	Westview Pkwy / Black Mountain Rd.	16.7	B	17.5	B	16.8	B	0.1	No	17.8	B	0.3	No
4	Capricorn Way / Black Mountain Rd.	41.0	D	39.5	D	42.2	D	1.2	No	39.5	D	0.0	No
5	Kika Ct. / Mercy Rd.	6.0	A	6.2	A	6.0	A	0.0	No	6.4	A	0.2	No
6	Mercy Rd. / Alemania Rd.	15.6	B	10.7	B	15.6	B	0.0	No	12.9	B	2.2	No
7	Mercy Rd. / I-15 SB ramps	34.2	C	32.6	C	34.4	C	0.2	No	53.1	D	20.5	No
8	Scripps Poway Pkwy / I-15 NB ramps	10.1	B	22.7	C	10.2	B	0.1	No	27.2	C	4.5	No
9	Scripps Poway Pkwy / Scripps Highlands Dr.	19.8	B	21.0	C	24.1	C	4.3	No	54.8	D	33.8	No
10	Scripps Highland Dr. / Scripps Gateway *	14.3	B	7.2	A	6.9	A	-7.4	No	17.0	B	9.8	No
11	Scripps Poway Pkwy / Scripps Summit Dr.	27.4	C	32.1	C	32.3	C	4.9	No	48.2	D	16.1	No
12	Scripps Poway Pkwy / Spring Canyon Rd.	26.5	C	29.9	C	35.0	C	8.5	No	47.9	D	18.0	No
13	Scripps Poway Pkwy / Scripps Creek Dr.	26.8	C	23.1	C	27.2	C	0.4	No	28.3	C	5.2	No
14	Scripps Poway Pkwy / Cypress Canyon Rd.	11.8	B	12.6	B	12.1	B	0.3	No	14.0	B	1.4	No
15	Scripps Poway Pkwy / Springbrook Dr.	22.0	C	32.2	C	22.3	C	0.3	No	40.7	D	8.5	No
16	Scripps Poway Pkwy / Pomerado Rd.	29.4	C	35.7	D	29.4	C	0.0	No	37.1	D	1.4	No
17	Scripps Poway Pkwy / Kirkham Rd.	12.4	B	24.5	C	13.8	B	1.4	No	25.3	C	0.8	No

Notes:

* = Outbound lane configuration improved per Watermark Site Plan.

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

TABLE 14-4

Near Term With and Without Project Intersection Summary

#	Intersection	Near Term				Near Term With Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Park Village Rd. / Black Mountain Rd.	50.7	D	44.5	D	51.6	D	0.9	No	46.0	D	1.5	No
2	Mercy Rd. / Black Mountain Rd.	33.4	C	33.5	C	34.0	C	0.6	No	35.6	D	2.1	No
3	Westview Pkwy / Black Mountain Rd.	16.7	B	20.7	C	16.7	B	0.0	No	21.3	C	0.6	No
4	Capricorn Way / Black Mountain Rd.	41.0	D	40.0	D	42.1	D	1.1	No	41.0	D	1.0	No
5	Kika Ct. / Mercy Rd.	6.0	A	6.3	A	6.1	A	0.1	No	6.5	A	0.2	No
6	Mercy Rd. / Alemania Rd.	15.6	B	11.2	B	15.7	B	0.1	No	11.9	B	0.7	No
7	Mercy Rd. / I-15 SB ramps	34.2	C	37.6	D	37.0	D	2.8	No	66.7	E	29.1	Yes
8	Scripps Poway Pkwy / I-15 NB ramps	10.1	B	15.4	B	10.2	B	0.1	No	19.0	B	3.6	No
9	Scripps Poway Pkwy / Scripps Highlands Dr.	19.8	B	25.1	C	23.4	C	3.6	No	135.5	F	110.4	Yes
10	Scripps Highland Dr. / Scripps Gateway *	18.3	B	12.1	B	7.1	A	-11.2	No	20.7	C	8.6	No
11	Scripps Poway Pkwy / Scripps Summit Dr.	29.9	C	33.3	C	39.1	D	9.2	No	45.2	D	11.9	No
12	Scripps Poway Pkwy / Spring Canyon Rd.	27.1	C	39.9	D	29.1	C	2.0	No	49.4	D	9.5	No
13	Scripps Poway Pkwy / Scripps Creek Dr.	27.0	C	24.5	C	27.6	C	0.6	No	29.4	C	4.9	No
14	Scripps Poway Pkwy / Cypress Canyon Rd.	12.1	B	12.8	B	12.4	B	0.3	No	16.3	B	3.5	No
15	Scripps Poway Pkwy / Springbrook Dr.	23.0	C	33.2	C	23.1	C	0.1	No	43.1	D	9.9	No
16	Scripps Poway Pkwy / Pomerado Rd.	29.5	C	35.8	D	29.5	C	0.0	No	36.7	D	0.9	No
17	Scripps Poway Pkwy / Kirkham Rd.	13.8	B	24.6	C	14.3	B	0.5	No	25.8	C	1.2	No

Notes:

* = Outbound lane configuration improved per Watermark Site Plan.

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

TABLE 14-5

Horizon Year 2030 With and Without Project Street Segment Significance

Road	Segment	Jurisd.	# lanes	Class.	Year 2030			Year 2030 + Project			ΔV/C	Is this impact Significant?
					LOS	Volume	V/C	LOS	Volume	V/C		
Black Mountain Rd.	Mercy Rd./Park Village Dr.	SD	4	4-M	D	33,972	0.85	D	34,900	0.87	0.023	NO
	Westview Pkwy./ Mercy Rd.	SD	6	PA	B	34,401	0.57	C	35,700	0.60	0.022	NO
	Capricorn Way/ Westview Pkwy.	SD	6	PA	C	39,587	0.66	C	40,700	0.68	0.019	NO
Mercy Road	Black Mountain Rd./ Kika Ct.	SD	4	4-M	B	18,174	0.45	B	20,400	0.51	0.056	NO
	Kika Ct./ Alemania Rd.	SD	4	4-M	C	21,888	0.55	C	24,300	0.61	0.060	NO
	Alemania Rd./ I-15 SB Ramps	SD	4	4-M	C	24,017	0.60	C	26,800	0.67	0.070	NO
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	SD	6	PA	E	59,880	1.00	F	73,000	1.22	0.219	YES
	Scripps Highland Dr./ Scripps Summit Dr.	SD	6	PA	D	52,157	0.87	E	59,900	1.00	0.129	YES
	Scripps Summit Dr./ Spring Canyon Rd.	SD	6	PA	C	46,220	0.77	D	51,600	0.86	0.090	NO
	Spring Canyon Rd./ Scripps Creek Dr.	SD	4	4-M	F	40,032	1.00	F	43,000	1.08	0.074	YES
	Scripps Creek Dr./ Cypress Canyon Rd.	SD	4	4-M	E	38,488	0.96	F	40,900	1.02	0.060	YES
	Cypress Canyon Rd./ Angelique St.	SD	4	4-M	E	37,159	0.93	E	39,200	0.98	0.051	YES
	Angelique St./ Pomerado Rd.	Poway	6	PA	E	56,630	0.94	E	58,300	0.97	0.028	YES
	Pomerado Rd./ Kirkham Rd.	Poway	6	PA	D	52,387	0.87	D	53,500	0.89	0.019	NO

Legend:

- LOS= Level of Service
- V/C= Volume to Capacity Ratio
- ΔV/C= Change in V/C ratio
- PA = 6 lane Prime Arterial
- 4-M = 4 Lane Major Arterial
- SD= San Diego

Horizon Year 2030 With and Without Project Arterial Significance

Road	Segment	# of Lanes	Jurisd.	Class.	Direction	Year 2030				Year 2030 + Project				ΔSpeed (mph) AM	ΔSpeed (mph) PM	Is this impact Significant?
						AM		PM		AM		PM				
						Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	
Scripps Poway Parkway	I-15 NB Ramps/ Scripps Highland Dr.	6	SD	PA	Eastbound	14.9	E	13.8	E	10.4	F	10.4	F	4.5	3.4	YES
					Westbound	22.2	C	20.2	D	17.7	D	17.7	D	4.5	2.5	NO
	Scripps Highland Dr./ Scripps Summit Dr.	6	SD	PA	Eastbound	29.7	B	13.4	E	9	F	10.1	F	20.7	3.3	YES
					Westbound	31.1	B	24.7	C	21.4	D	21.4	D	9.7	3.3	NO
	Scripps Summit Dr./ Spring Canyon Rd.	6	SD	PA	Eastbound	14.4	E	15.6	E	15.9	E	8.7	F	-1.5	6.9	YES
					Westbound	12.0	F	16.7	E	12.5	F	13.6	E	-0.5	3.1	YES
	Spring Canyon Rd./ Scripps Creek Dr.	4	SD	4-M	Eastbound	20.1	D	21.1	D	22.5	C	22.5	C	-2.4	-1.4	NO
					Westbound	23.6	C	26.8	C	26.3	C	25.5	C	-2.7	1.3	NO
	Scripps Creek Dr./ Cypress Canyon Rd.	4	SD	4-M	Eastbound	23.8	C	23.0	C	21.0	D	21.0	D	2.8	2.0	NO
					Westbound	23.2	C	24.7	C	22.5	C	22.5	C	0.7	2.2	NO
	Cypress Canyon Rd./ Vail Ct.	4	SD	4-M	Eastbound	24.4	C	22.2	C	22.9	C	22.9	C	1.5	-0.7	NO
					Westbound	31.4	B	30.9	B	29.9	B	29.9	B	1.5	1.0	NO
	Angelique St./ Pomerado Rd.	6	Poway	PA	Eastbound	24.5	C	24.1	C	23.2	C	23.2	C	1.3	0.9	NO
					Westbound	25.0	C	20.4	D	18.6	D	18.6	D	6.4	1.8	NO
	Pomerado Rd./ Kirkham Rd.	6	Poway	PA	Eastbound	39.5	A	32.5	B	31.2	B	31.2	B	8.3	1.3	NO
					Westbound	35.2	A	31.8	B	31.5	B	31.5	B	3.7	0.3	NO

Legend:

- LOS= Level of Service
- PA = 6 lane Prime Arterial
- 4-M = 4 Lane Major Arterial
- SD= San Diego

TABLE 14-6

Horizon Year 2030 With & Without Project Intersection Summary

#	Intersection	Year 2030				Year 2030 + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Park Village Rd. / Black Mountain Rd.	56.0	E	45.0	D	56.5	E	0.5	No	46.8	D	1.8	No
2	Mercy Rd. / Black Mountain Rd.	34.0	C	35.2	D	34.5	C	0.5	No	37.5	D	2.3	No
3	Westview Pkwy / Black Mountain Rd.	16.8	B	20.8	C	16.9	B	0.1	No	22.3	C	1.5	No
4	Capricorn Way / Black Mountain Rd.	45.1	D	40.7	D	46.2	D	1.1	No	42.6	D	1.9	No
5	Kika Ct. / Mercy Rd.	6.4	A	6.5	A	6.5	A	0.1	No	7.1	A	0.6	No
6	Mercy Rd. / Alemania Rd.	15.4	B	12.3	B	15.6	B	0.2	No	12.7	B	0.4	No
7	Mercy Rd. / I-15 SB ramps	35.0	C	39.2	D	38.6	D	3.6	No	68.3	E	29.1	Yes
8	Scripps Poway Pkwy / I-15 NB ramps	10.5	B	27.6	C	11.6	B	1.1	No	30.5	C	2.9	No
9	Scripps Poway Pkwy / Scripps Highlands Dr.	22.0	C	30.3	C	24.7	C	2.7	No	178.6	F	148.3	Yes
10	Scripps Highlands Dr. / Scripps Gateway Ct. *	18.3	B	12.2	B	7.1	A	-11.2	No	21.3	C	9.1	No
11	Scripps Poway Pkwy / Scripps Summit Dr.	32.4	C	48.8	D	41.8	D	9.4	No	52.7	D	3.9	No
12	Scripps Poway Pkwy / Spring Canyon Rd.	33.1	C	34.6	C	34.7	C	1.6	No	51.8	D	17.2	No
13	Scripps Poway Pkwy / Scripps Creek Dr.	27.2	C	25.2	C	27.6	C	0.4	No	28.5	C	3.3	No
14	Scripps Poway Pkwy / Cypress Canyon Rd.	12.5	B	13.9	B	14.0	B	1.5	No	19.0	B	5.1	No
15	Scripps Poway Pkwy / Springbrook Dr.	32.4	C	48.2	D	33.3	C	0.9	No	51.9	D	3.7	No
16	Scripps Poway Pkwy / Pomerado Rd.	37.9	D	44.7	D	38.2	D	0.3	No	47.1	D	2.4	No
17	Scripps Poway Pkwy / Kirkham Rd.	17.2	B	35.8	D	17.5	B	0.3	No	39.8	D	4.0	No

Intersection impacts are expected to occur at the following two (2) locations:

Intersection

Mercy Road / I-15 SB Ramps

Scripps Poway Parkway / Scripps Highlands Dr.

As shown in Section 13.0, there are no anticipated Freeway or Ramp Meter cumulative impacts.

14.7 MITIGATION

Based on consultation with Caltrans as well as City Staff, a reconfiguration of the Scripps Poway Parkway/I-15 Interchange is proposed as shown on the attached exhibit. This reconfiguration would shift the Westbound through lanes on Scripps Poway Parkway to the north and provide additional queuing length for Westbound traffic on Scripps Poway Parkway to the Interchange. The “back-to-back” left turn lanes are proposed to be eliminated and additional queuing for traffic turning left from Scripps Poway Parkway to Southbound I-15 will be provided. This reconfiguration is expected to not only provide additional queuing but improve signal operation in the Interchange area through better coordination of signals and smoother traffic flow. Median modification to increase road width on Scripps Poway Parkway east of the Interchange will be required to improve traffic flow and queuing. Please refer to **Figure 1-1** for details.

Improvements to the intersection of Scripps Poway Parkway and Scripps Highland Drive are discussed in Section 12.0. These improvements include a northbound triple left at this intersection. With these

improvements, the anticipated LOS at the impacted intersections with and without mitigation is shown on **Table 14-7**.

Synchro sheets showing the level of service results discussed above are included in **Appendix L**.

Additional improvements are also discussed in Section 12.0. A bicycle path and wide sidewalk intended to provide safer bicycle operations along Scripps Poway Parkway near the project frontage will be provided. This improvement is proposed due to the addition of a right in/out access for the project on Scripps Poway Parkway which necessitated the removal of bicyclists from the traffic stream on eastbound Scripps Poway Parkway due to vehicular weaving movements.

No further improvements are proposed. All intersection impacts would be mitigated to an acceptable LOS as discussed above. However, significant and unmitigated impacts would result on several street segments at the following locations:

<u>Road</u>	<u>Segment</u>
Scripps Poway Pkwy.	I-15 NB / Scripps Highland Dr.
Scripps Poway Pkwy.	Scripps Highland Dr. / Scripps Summit Dr.
Scripps Poway Pkwy.	Scripps Summit Dr./ Spring Canyon Rd.
Scripps Poway Pkwy.	Spring Canyon Rd./ Scripps Creek Drive
Scripps Poway Pkwy.	Scripps Creek Dr. / Cypress Canyon Road
Scripps Poway Pkwy.	Cypress Canyon Road/ Angelique Street

Currently, the segments of Scripps Poway Parkway west of Spring Canyon Road are constructed to their ultimate Community Plan classification.

TABLE 14-7

Near Term and Horizon Year 2030 Intersection Mitigation LOS Comparison

Near Term

#	Intersection	Near Term				Near Term with Project (unmitigated)				Near Term With Project (mitigated)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS	D	LOS	D	LOS			D	LOS		
7	Mercy Rd. / I-15 SB ramps	34.2	C	37.6	D	37.0	D	66.7	E	37.5	D	0.5	No	51.9	D	-14.8	No
9	Scripps Poway Pkwy / Scripps Highlands Dr.	19.8	B	25.1	C	23.4	C	135.5	F	35.5	D	12.1	No	52.4	D	-83.1	No

Notes:

LOS = Level of Service
 Δ = Change
 S = Significant
 D = Delay

Horizon Year

#	Intersection	Year 2030				Year 2030 with Project (unmitigated)				Year 2030 + Project (mitigated)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS	D	LOS	D	LOS			D	LOS		
7	Mercy Rd. / I-15 SB ramps	35.0	C	39.2	D	38.6	D	68.3	E	37.5	D	-1.1	No	54.8	D	-13.5	No
9	Scripps Poway Pkwy / Scripps Highlands Dr.	22.0	C	30.3	C	24.7	C	178.6	F	45.2	D	20.5	No	54.0	D	-124.6	No

Notes:

LOS = Level of Service
 Δ = Change
 S = Significant
 D = Delay

The road segment analysis indicates the potential for impacts on Scripps Poway Parkway between Spring Canyon Road and Angelique Street as well. However, upon closer inspection, the more detailed arterial analysis indicates that these road segments would experience an acceptable LOS with the project in all conditions. Therefore, although disclosed as an impact, it is anticipated that an acceptable LOS will be maintained in the future and no widening will be necessary.

15.0 REFERENCES

San Diego Region Traffic Engineer's Council (SANTEC) and Institute of Transportation Engineers (ITE),
California Border Section, Guidelines for Congestion Management Program (CMP)
Traffic Impact Report, San Diego, CA

City of San Diego, Development Services Department, San Diego Municipal Code, Land Development
Code, Trip Generation Manual, May 2003, San Diego, CA

City of San Diego, Development Services Department, California Environmental Quality Act, Significant
Determination Thresholds, January 2011, San Diego, CA

San Diego Association of Governments, 2006 Congestion Management Program Update, Appendix D,
July 2006, San Diego, CA

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