5.11 TRANSPORTATION AND TRAFFIC

This section of the Draft Supplemental Environmental Impact Report (SEIR) evaluates potential impacts to transportation and traffic in areas proposed for land use changes under the Newport Beach General Plan LUE Amendment and in portions of adjacent cities, including Irvine, Costa Mesa, and Tustin.

The analysis in this section is based in part on the *City of Newport Beach General Plan Land Use Element Amendment Traffic Impact Analysis*, prepared by Urban Crossroads on March 11, 2014. A complete copy of this study is included in the Technical Appendices to this Draft SEIR (Appendix J).

5.11.1 Environmental Setting

Existing Roadway Network

Figure 5.11-1, *Existing Through Lanes,* identifies the existing circulation system in the study area together with existing midblock lanes on arterial roadways. Existing study area intersections analysis locations are shown on Figure 5.11-2. Of the 90 existing intersection analysis locations, 64 are in the City of Newport Beach, and 26 are in the City of Irvine. A few are on City boundaries with Tustin and Costa Mesa. The following analyzes the existing roadway network and conditions in the study area.

Existing Roadway Daily Traffic Volumes and Conditions

The roadway system is generally organized by a roadway classification system. The road classifications used by the City of Newport Beach and the City of Irvine are required to be consistent with the County of Orange Master Plan of Arterial Highways, which is administered by the Orange County Transportation Authority (OCTA).The general roadway classifications are presented below:

- **Principal Arterial**. A Principal arterial highway is typically an eight-lane divided roadway. Principal arterials carry a large volume of regional through-traffic not handled by the freeway system.

- **Major Arterial**. A Major arterial highway is typically a six-lane divided roadway. Major arterials carry a large volume of regional through-traffic not handled by the freeway system.

- **Primary Arterial**. A Primary arterial highway is usually a four-lane divided roadway. A Primary arterial's function is similar to that of a Principal or Major arterial. The chief difference is capacity.

- **Secondary Arterial**. A Secondary arterial highway is a four-lane roadway (often undivided). A Secondary arterial distributes traffic between local streets and Major or Primary arterials. Although some Secondary arterials serve as through routes, most provide more direct access to surrounding land uses than Principal, Major, or Primary arterials.

- **Commuter Roadway**. A commuter roadway is a two- to four-lane, unrestricted access roadway. It differs from a local street in its ability to handle through-traffic movements between arterials.

Average daily traffic (ADT) counts for midblock arterial roadway segments in the study area were generally conducted in 2013; a summary of the daily volumes at study-area roadways is provided in Table 5.11-1.

Table 5.11-1 Roadway Average Daily Traffic Volumes, Existing Conditions

Segment Location	ADT
Superior Av n/o Placentia Av	21,000
Newport Bl n/o Via Lido	49,000
Campus Dr. n/o Bristol St (N)	28,000
Irvine Av n/o Westcliff Dr.	23,000
Dover Dr. n/o Coast Hw	30,000
Jamboree Rd n/o University Dr.	45,000
Jamboree Rd n/o San Joaquin Hills Rd	50,000
Newport Ctr. n/o Coast Hw	14,000
Avocado Av n/o Coast Hw	11,000
MacArthur Bl. n/o San Joaquin Hills Rd	61,000
MacArthur Bl. n/o Coast Hw	34,000
Newport Coast n/o San Joaquin Hills Rd	24,000
Superior Av s/o Coast Hw	21,000
Newport Bl. s/o Hospital Rd	52,000
MacArthur Bl. s/o Birch St	19,000
Irvine Av s/o Mesa Dr.	25,000
Irvine Av s/o Santiago Dr.	25,000
Jamboree Rd s/o Bison Av	40,000
Jamboree Rd s/o Santa Barbara Dr.	35,000
MacArthur Bl. s/o Bison Av	69,000
Coast Hw e/o Superior Av	39,000
Campus Dr. e/o Von Karman Av	11,000
Mesa Dr. e/o Irvine Av	6,000
Coast Hw e/o Dover Dr.	64,000
University Dr. e/o Jamboree Rd	9,000
Ford Rd e/o Jamboree Rd	10,000
San Joaquin Hills Rd e/o Jamboree Rd	21,000
Coast Hw e/o Jamboree Rd	41,000
San Miguel Dr. e/o Avocado Av	24,000
Bison Av e/o SR-73 NB	22,000
Ford Rd e/o MacArthur Bl.	32,000
San Joaquin Hills Rd e/o MacArthur Bl.	23,000
Coast Hw e/o MacArthur Bl.	51,000
San Joaquin Hills Rd e/o Spyglass Hill Park	17,000
Coast Hw e/o Newport Coast	38,000

Table 5.11-1 Roadway Average Daily Traffic Volumes, Existing Conditions

Segment Location	ADT
Coast Hw w/o Superior Av	47,000
Coast Hw w/o Dover	44,000
19th St SR-55-Orange St	29,000
Red Hill Av., from Deere to Barranca Rd.	27,000
Red Hill Av., from McGaw Av. to Alton Pkwy.	28,000
Red Hill Av., from MacArthur Bl. to McGaw Av.	36,000
Red Hill Av., from Sky Park to MacArthur Bl.	18,000
MacArthur Bl., from N/B I-405 to Main St.	51,000
MacArthur Bl., from Michelson Dr. to S/B I-405	51,000
Von Karman Av., from Alton Pkwy. to Barranca Rd.	21,000
Von Karman Av., from McGaw Av. to Alton Pkwy.	19,000
Von Karman Av., from Morse to Main St.	20,000
Jamboree Rd., from Barranca Rd. to Warner	61,000
Jamboree Rd., from Beckman to Barranca Rd.	51,000
Jamboree Rd., from Main St. to Kelvin	56,000
Jamboree Rd., from S/B I-405 to Main St.	72,000
Jamboree Rd., from Michelson Dr. to S/B I-405	71,000
Barranca Rd., from Pullman to Red Hill Av.	31,000
Barranca Rd., from Armstrong to Von Karman Av.	37,000
Barranca Rd., from Jamboree Rd. to Construction	30,000
Alton Pkwy., from Red Hill to Von Karman Av.	13,000
Alton Pkwy., from Jamboree Rd. to Murphy	19,000
MacArthur Bl., from Red Hill Av. to Fitch	37,000
Main St., from Red Hill Av. to MacArthur Bl.	23,000
Main St., from MacArthur Bl. to Von Karman Av.	32,000
Main St., from Jamboree Rd. to Harvard	23,000
Michelson Dr., from Von Karman Av. to Jamboree Rd.	18,000
Michelson Dr., from Jamboree Rd. to Harvard	16,000
MacArthur Bl., from Main St. to Red Hill Av.	25,000

Source: Urban Crossroads, 2014.

Traffic operations of roadway facilities are described with the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS "A", representing completely free-flow conditions, to LOS "F",

representing breakdown in flow resulting in stop-and-go conditions. LOS "E" represents operations at or near capacity, an unstable level, where vehicles are operating with the minimum spacing for maintaining uniform flow. Table 5.11-2, *Volume/Capacity and Corresponding Level of Service,* summarizes the volume/capacity (V/C) ranges for LOS "A" through "F". The V/C ranges are designated in the Orange County Congestion Management Program (CMP) as well as the General Plans for the City of Newport Beach and City of Irvine for arterial roads and signalized intersections.

Table 5.11-2 Volume/Capacity and Corresponding Level of Service

Level of Service (LOS)	Volume/Capacity (V/C) Ratio Range
A	0.00–0.60
B	0.61–0.70
C	0.71–0.80
D	0.81–0.90
E	0.91–1.00
F	Above 1.00

Source: Urban Crossroads 2014.

Daily roadway segment analysis requires calculating the daily traffic volume divided by the roadway segment capacity. The resulting ADT V/C ratios for existing conditions on the arterial roadway system in the study area are illustrated on Figure 5.11-3, *Existing Conditions V/C Ratios*. Based on the ADT V/C level of service performance criteria, arterials in the study area generally appear to have volume less than theoretical planning level capacity (V/C>1.0) with the exception of the following locations:

- Newport Boulevard north of Coast Highway
- Coast Highway between Newport Boulevard and Dover Drive
- Coast Highway between MacArthur Boulevard and Marguerite Avenue
- 17th Street east of SR-55 Freeway
- MacArthur Boulevard between Bison Avenue and San Joaquin Hills Road

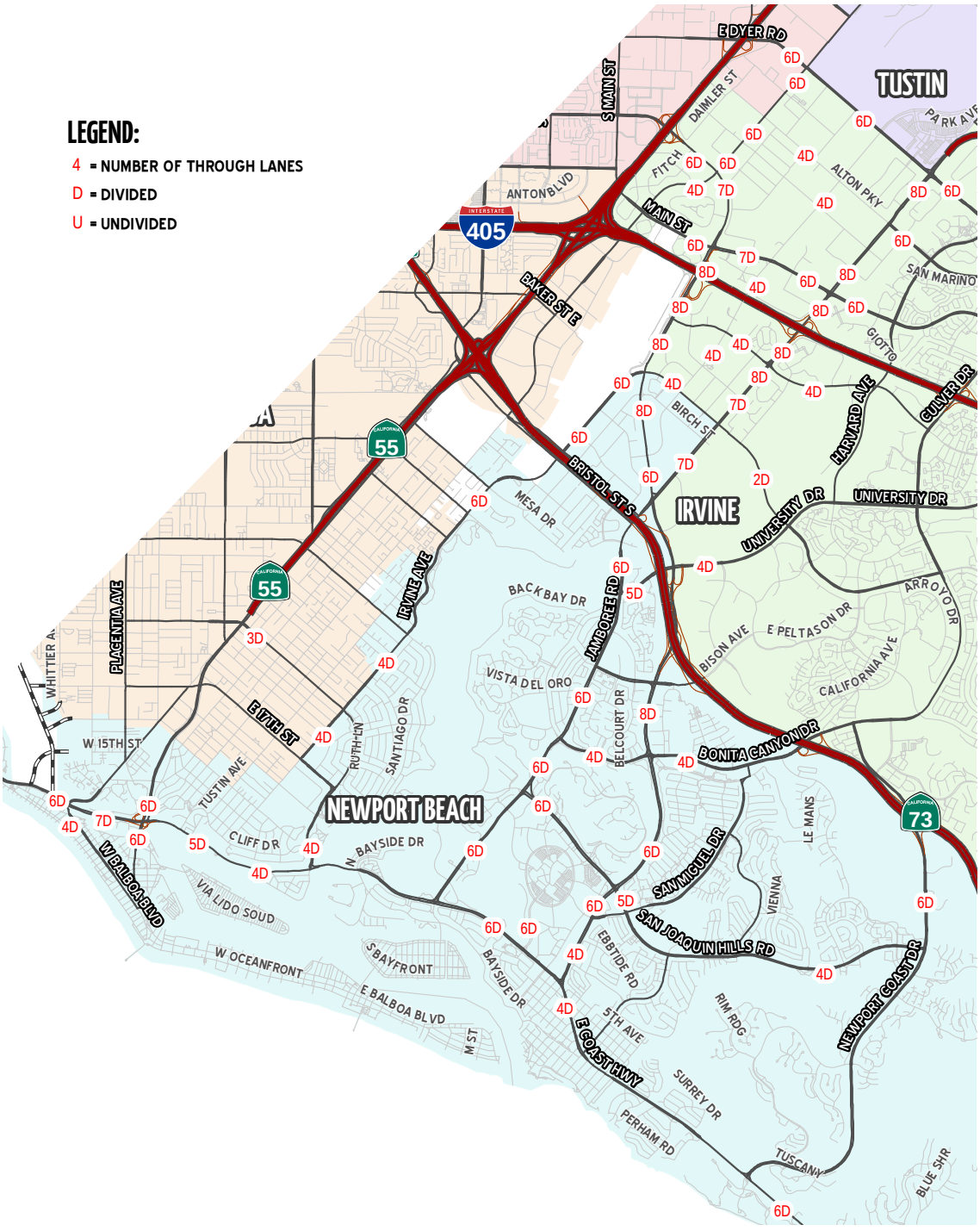
The typical daily capacities are most appropriately used as a screening tool to evaluate overall vehicular activity levels, subject to more detailed peak hour analysis at key intersections. The following evaluates intersection operations during peak hour conditions.

Existing Intersection Peak Hour Traffic Volumes and Conditions

Existing AM and PM peak hour intersection volumes in the study area are shown on traffic impact analysis Exhibits 2-F and 2-G, respectively (Urban Crossroads 2014). Intersection counts were taken in 2012 and 2013. Existing study area intersections turn lanes and intersection controls are shown on Figures 5.11-4a and 5.11-4b.

Figure 5.11-1

Existing Through Lanes



Land Use Element Update

Supplemental EIR

Source: Urban Crossroads, 2014

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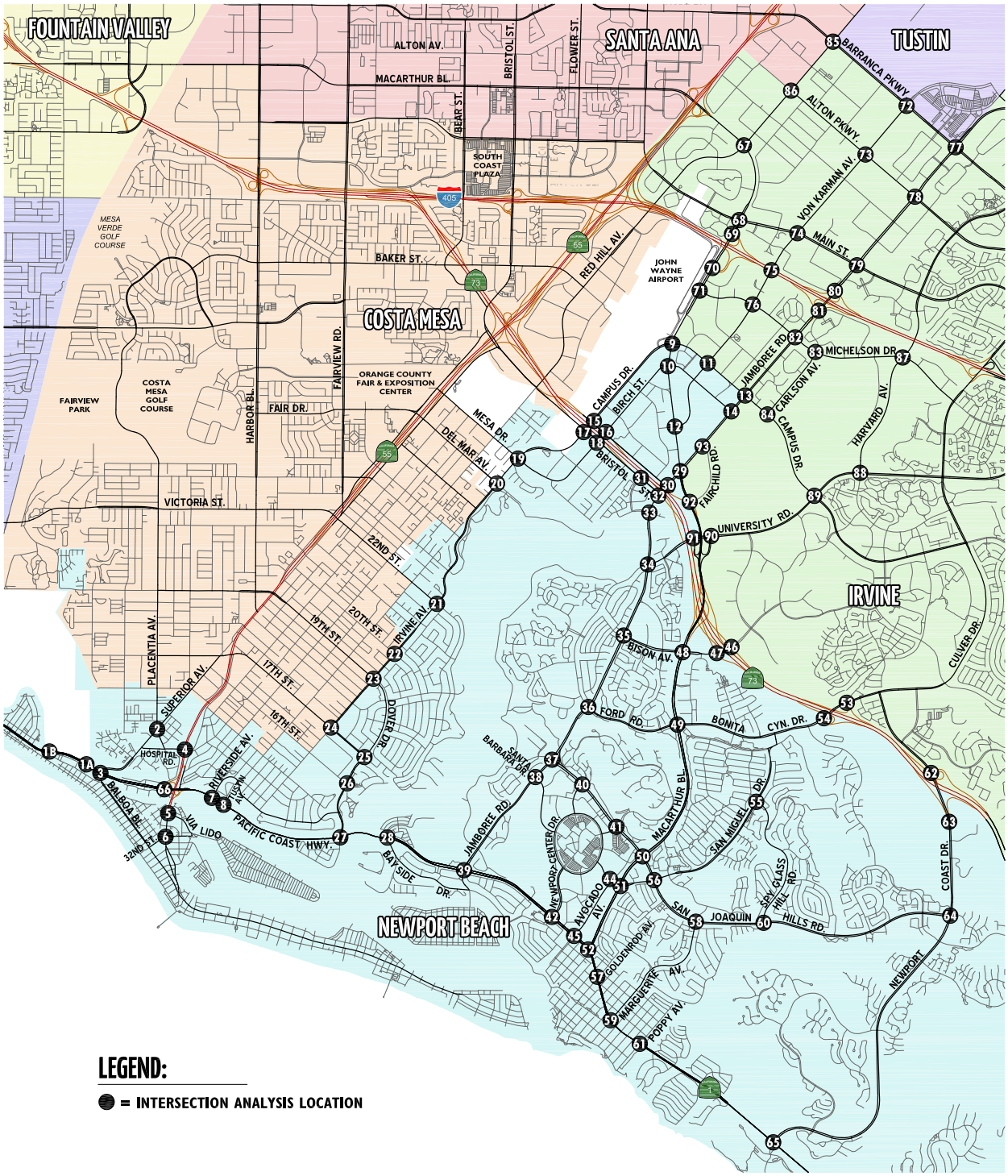
Figure 5.11-2

Study Area Intersections



Land Use Element Update

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0 0.5 1 Miles

Source: Urban Crossroads, 2014

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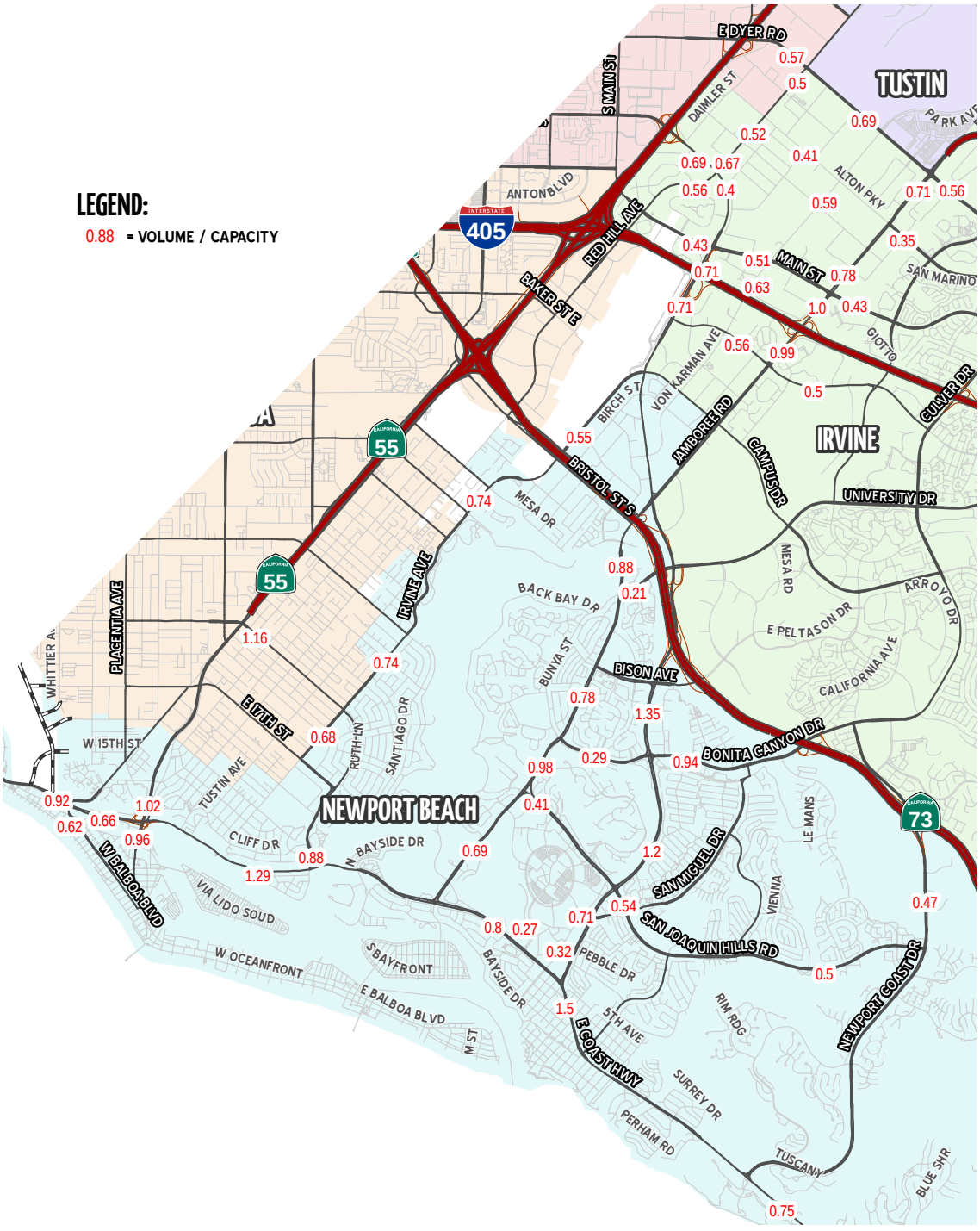
Figure 5.11-3

Existing Conditions V/C Ratios



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Source: Urban Crossroads, 2014

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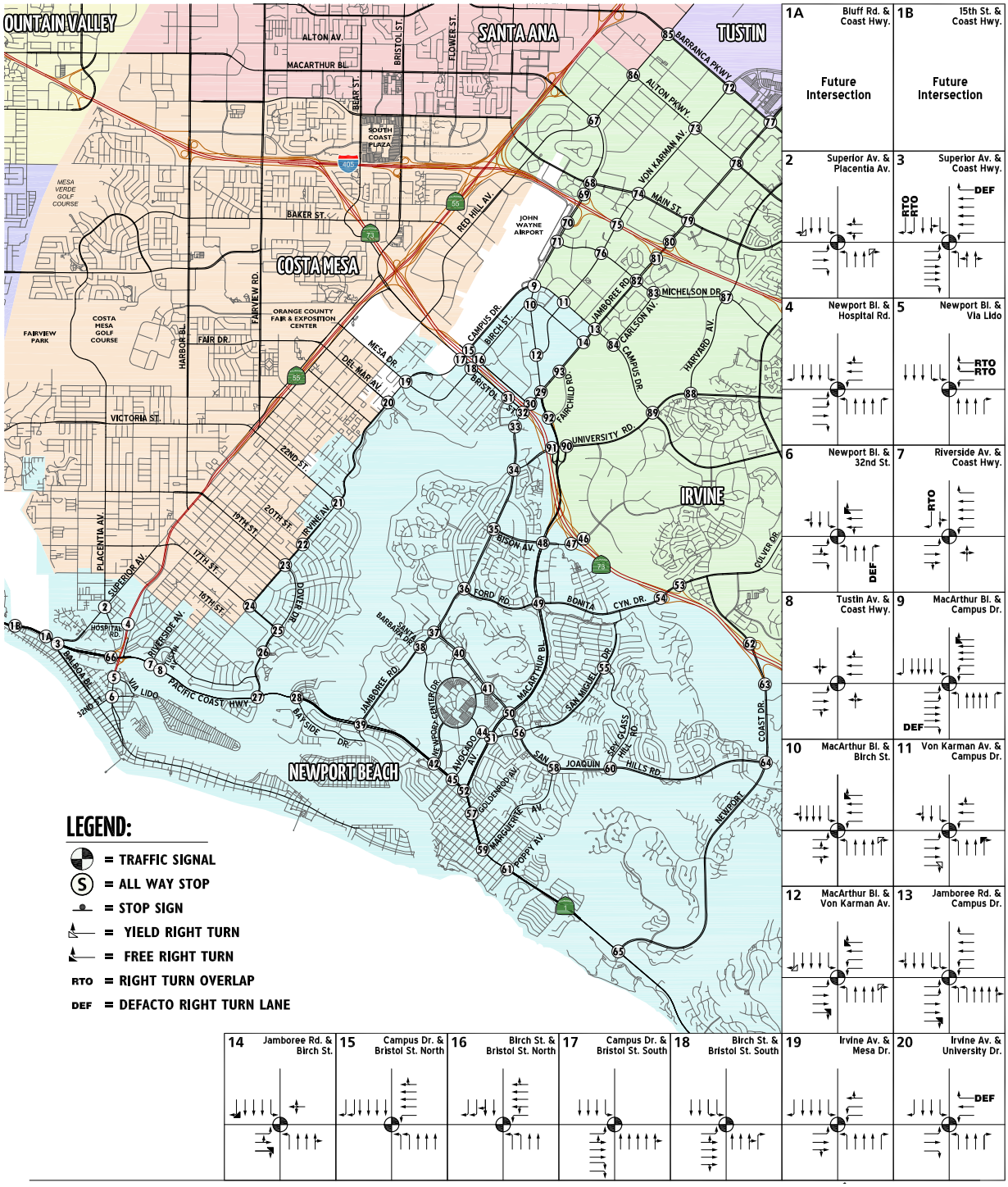
Figure 5.11-4a

Existing Study Area Intersections Turn Lanes and Intersection Controls



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Source: Urban Crossroads, 2014

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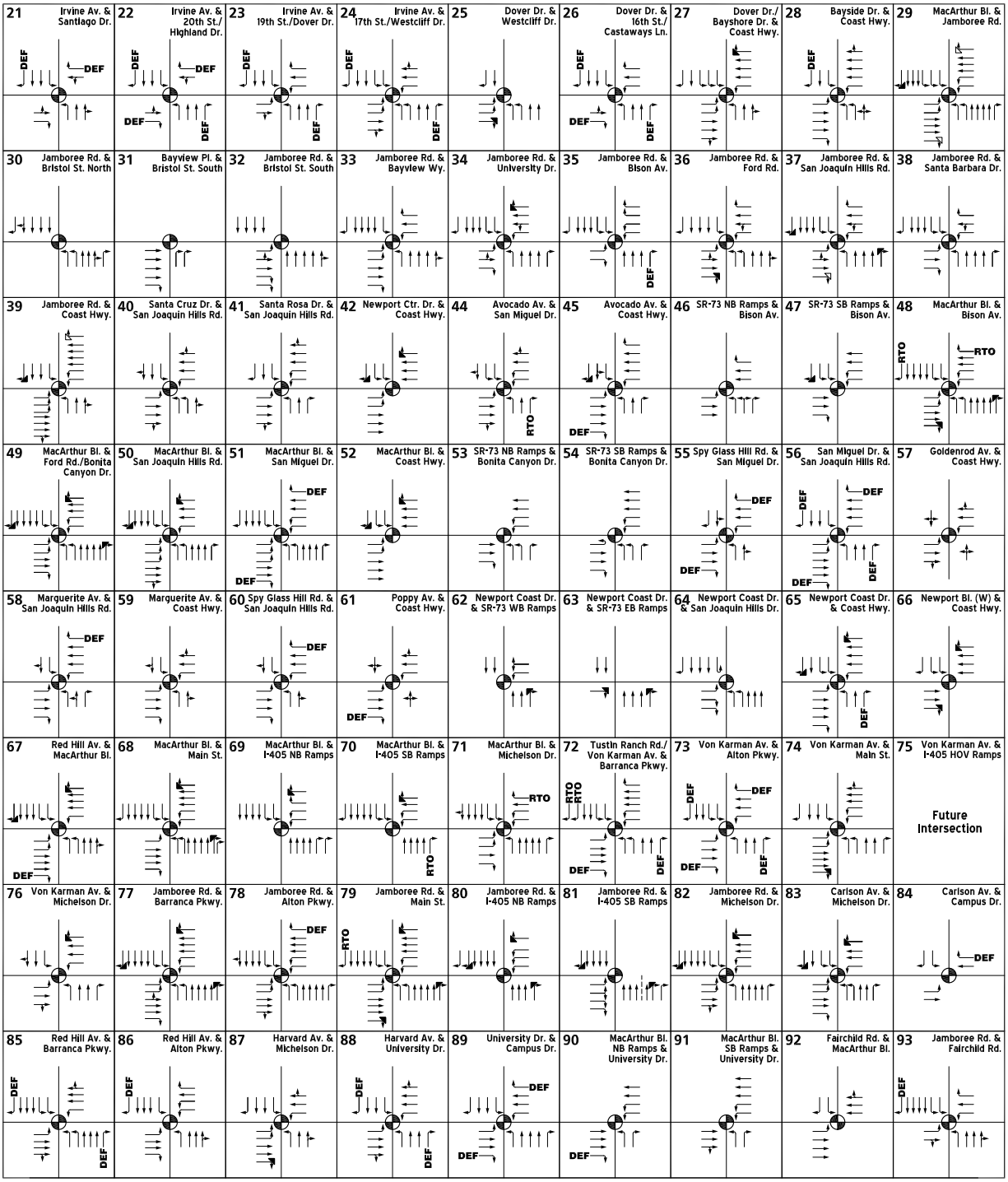
Figure 5.11-4b

Existing Study Area Intersections Turn Lanes



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0 0.5 1 Miles

Source: Urban Crossroads, 2014

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Intersection Capacity Utilization (ICU) analysis has been performed at study area intersections. The ICU analysis is based on peak hour volumes and uses individual turn movements and the corresponding intersection lane geometry to estimate level of service. The ICU value is usually expressed as a decimal and shows the portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity. Existing ICU values were calculated for the intersections illustrated in Figure 5.11-2 using peak hour traffic count data in combination with the existing lane configuration of each location (see Table 5.11-3).

Table 5.11-3 Existing Conditions Intersection Operations Analysis Summary

ID	Intersection	LOS E Acceptable	(V/C)1		LOS2	
			AM	PM	AM	PM
2	Superior Av/Placentia Av.		0.57	0.63	A	B
3	Superior Av/Coast Hwy.		0.82	0.80	D	C
4	Newport Bl./Hospital Rd.		0.55	0.61	A	B
5	Newport Bl./Via Lido		0.37	0.35	A	A
6	Newport Bl./32nd St.		0.43	0.48	A	A
7	Riverside Av./Coast Hwy.		0.76	0.71	C	C
8	Tustin Av./Coast Hwy.		0.75	0.57	C	A
9	MacArthur Bl./Campus Dr.	x	0.51	0.74	A	C
10	MacArthur Bl./Birch St.		0.33	0.48	A	A
11	Von Karman Av./Campus Dr.	x	0.50	0.63	A	B
12	MacArthur Bl./Von Karman Av.		0.56	0.49	A	A
13	Jamboree Rd./Campus Dr.	x	0.53	0.62	A	B
14	Jamboree Rd./Birch St.	x	0.49	0.49	A	A
15	Campus Dr./Bristol St. (N)	x	0.51	0.74	A	C
16	Birch St./Bristol St. (N)		0.50	0.49	A	A
17	Campus Dr./Bristol St. (S)		0.57	0.45	A	A
18	Birch St./Bristol St. (S)		0.35	0.43	A	A
19	Irvine Av./Mesa Dr.		0.36	0.55	A	A
20	Irvine Av./University Dr.		0.59	0.69	A	B
21	Irvine Av./Santiago Dr.		0.58	0.60	A	A
22	Irvine Av./Highland Dr.		0.45	0.53	A	A
23	Irvine Av./Dover Dr.		0.52	0.61	A	B
24	Irvine Av./Westcliff Dr.		0.45	0.70	A	B
25	Dover Dr./Westcliff Dr.		0.43	0.44	A	A
26	Dover Dr./16th St.		0.50	0.50	A	A
27	Dover Dr./Coast Hwy.	x	0.69	0.71	B	C

Table 5.11-3 Existing Conditions Intersection Operations Analysis Summary

ID	Intersection	LOS E Acceptable	(V/C)1		LOS2	
			AM	PM	AM	PM
28	Bayside Dr./Coast Hwy.		0.64	0.60	B	A
29	MacArthur Bl./Jamboree Rd.	x	0.58	0.71	A	C
30	Jamboree Rd./Bristol St. (N)		0.38	0.47	A	A
31	Bayview Pl./Bristol St. (S)		0.40	0.43	A	A
32	Jamboree Rd./Bristol St. (S)		0.58	0.55	A	A
33	Jamboree Rd./Bayview Wy		0.43	0.53	A	A
34	Jamboree Rd./University Dr.		0.56	0.57	A	A
35	Jamboree Rd./Bison Av.		0.51	0.45	A	A
36	Jamboree Rd./Ford Rd.		0.76	0.63	C	B
37	Jamboree Rd./San Joaquin Hills Rd.		0.60	0.82	A	D
38	Jamboree Rd./Santa Barbara Dr.		0.49	0.65	A	B
39	Jamboree Rd./Coast Hwy.		0.56	0.65	A	B
40	Santa Cruz Dr./San Joaquin Hills Rd.		0.31	0.34	A	A
41	Santa Rosa Dr./San Joaquin Hills Rd.		0.37	0.61	A	B
42	Newport Ctr. Dr./Coast Hwy.		0.36	0.44	A	A
44	Avocado Av./San Miguel Dr.		0.35	0.62	A	B
45	Avocado Av./Coast Hwy.		0.43	0.53	A	A
46	SR-73 NB/Bison Av.		0.58	0.48	A	A
47	SR-73 SB/Bison Av.		0.48	0.25	A	A
48	MacArthur Bl./Bison Av.		0.59	0.59	A	A
49	MacArthur Bl./Ford Dr.		0.76	0.87	C	D
50	MacArthur Bl./San Joaquin Hills Rd.		0.57	0.76	A	C
51	MacArthur Bl./San Miguel Dr.		0.65	0.57	B	A
52	MacArthur Bl./Coast Hwy.		0.51	0.57	A	A
53	SR-73 NB/Bonita Canyon Dr.		0.47	0.51	A	A
54	SR-73 SB/Bonita Canyon Dr.		0.37	0.54	A	A
55	Spy Glass Hill Rd./San Miguel Dr.		0.27	0.32	A	A
56	San Miguel Dr./San Joaquin Hills Rd.		0.44	0.48	A	A
57	Goldenrod Av./Coast Hwy.	x	0.74	0.72	C	C
58	Marguerite Av./San Joaquin Hills Rd.		0.41	0.44	A	A
59	Marguerite Av./Coast Hwy.	x	0.77	0.72	C	C
60	Spy Glass Hill Rd./San Joaquin Hills Rd.		0.33	0.29	A	A

Table 5.11-3 Existing Conditions Intersection Operations Analysis Summary

ID	Intersection	LOS E Acceptable	(V/C)1		LOS2	
			AM	PM	AM	PM
61	Poppy Av./Coast Hwy.		0.64	0.65	B	B
62	Newport Coast Dr./SR-73 NB		0.33	0.28	A	A
63	Newport Coast Dr./SR-73 SB		0.26	0.24	A	A
64	Newport Coast Dr./San Joaquin Hills Rd.		0.47	0.45	A	A
65	Newport Coast Dr./Coast Hwy.		0.44	0.50	A	A
66	Newport Bl. (W)/Coast Hwy.		0.86	0.65	D	B
67	Red Hill Av./MacArthur Bl.	x	0.60	0.72	A	C
68	MacArthur Bl./Main St.	x	0.57	0.73	A	C
69	MacArthur Bl./I-405 NB Ramps	x	0.63	0.62	B	B
70	MacArthur Bl./I-405 SB Ramps	x	0.59	0.65	A	B
71	MacArthur Bl./Michelson Dr.	x	0.61	0.74	B	C
72	Von Karman Av./Barranca Pkwy.	x	0.74	0.73	C	C
73	Von Karman Av./Alton Pkwy.	x	0.70	0.78	B	C
74	Von Karman Av./Main St.	x	0.63	0.77	B	C
76	Von Karman Av./Michelson Dr.	x	0.51	0.70	A	B
77	Jamboree Rd./Barranca Pkwy.	x	0.81	0.94	D	E
78	Jamboree Rd./Alton Pkwy.	x	0.72	0.83	C	D
79	Jamboree Rd./Main St.	x	0.78	0.96	C	E
80	Jamboree Rd./I-405 NB Ramps	x	0.68	0.80	B	C
81	Jamboree Rd./I-405 SB Ramps	x	0.89	0.79	D	C
82	Jamboree Rd./Michelson Dr.	x	0.67	0.82	B	D
83	Carlson Av./Michelson Dr.	x	0.48	0.52	A	A
84	Carlson Av./Campus Dr.	x	0.60	0.70	A	B
85	Red Hill Av./Barranca Pkwy.	x	0.79	0.94	C	E
86	Red Hill Av./Alton Pkwy.	x	0.53	0.78	A	C
87	Harvard Av./Michelson Dr.		0.76	0.94	C	E
88	Harvard Av./University Dr.		0.70	0.69	B	B
89	University Dr./Campus Dr.		0.76	0.71	C	C
90	MacArthur Bl. (NB)/University Dr.		0.44	0.43	A	A
91	MacArthur Bl. (SB)/University Dr.		0.42	0.33	A	A
92	Fairchild Rd./MacArthur Bl.	x	0.71	0.70	C	B
93	Jamboree Rd./Fairchild Rd.	x	0.63	0.63	B	B

Table 5.11-3 Existing Conditions Intersection Operations Analysis Summary

ID	Intersection	LOS E Acceptable	(V/C)1		LOS2	
			AM	PM	AM	PM

Source: Urban Crossroads, 2014.
[1] V/C = Volume/Capacity Ratio
[2] Level of Service (LOS) is calculated based on the Intersection Capacity Utilization (ICU) method.
x= Intersection where LOS E is acceptable.

Existing Freeway Ramps and Main Line Volumes and Conditions

The freeway system in the study area (I-405, SR-73 and SR-55 analysis segments) is defined by ramp-to-ramp directional segments. The freeway segments have been evaluated based upon peak hour directional volumes, according to the methodology described in the Highway Capacity Manual (HCM). The performance measure preferred by Caltrans to calculate LOS is density, which is expressed in terms of passenger cars per mile per lane. Freeway segment LOS thresholds for each density range utilized for this analysis are summarized in Table 1-3 of the traffic study (Urban Crossroad 2014). Table 5.11-4 shows the results of the freeway main line analysis. Freeway main line locations that experience deficient operations for Existing conditions include:

- NB SR-73, North of Jamboree Rd, (PM Peak Hour Only)
- NB SR-55, Dyer Rd. to MacArthur Blvd, (AM and PM Peak Hours)

Table 5.11-4 Existing Conditions Basic Freeway Segment Analysis

FREEWAY	DIRECTION	MAIN LINE SEGMENT LOCATION	LANES	VOLUME		DENSITY (cars/mile/lane)		LOS	
				AM	PM	AM	PM	AM	PM
I-405 FREEWAY	SB	North of SR-55 FWY	5+1H	8,631	9,569	28.9	34.1	D	D
		SR-55 FWY to MacArthur Blvd.	5+1H	10,090	11,296	37.9	>45.0	E	F
		North of Jamboree Rd.	6+1H	8,251	11,048	21.9	31.9	C	D
		South of Jamboree Rd.	6+1H	6,331	10,961	16.7	31.5	B	D
	NB	North of SR-55 Fwy	4+1H	7,055	5,129	29.8	20.3	D	C
		SR-55 FWY to MacArthur Blvd.	6+1H	7,085	7,478	18.7	24.0	C	C
		North of Jamboree Rd.	5+1H	8,382	6,825	27.7	21.7	D	C
		South of Jamboree Rd.	5+1H	8,593	6,117	28.7	19.4	D	C

Table 5.11-4 Existing Conditions Basic Freeway Segment Analysis

FREEWAY	DIRECTION	MAIN LINE SEGMENT LOCATION	LANES	VOLUME		DENSITY (cars/mile/lane)		LOS	
				AM	PM	AM	PM	AM	PM
SR-73 FREEWAY/TOLL ROAD	SB	North of SR-55 FWY	4	4,976	4,617	19.5	18.1	C	C
		North of Jamboree Rd.	3	7,422	6,885	31.8	28.3	D	D
		South of Jamboree Rd.	3	5,019	4,657	19.7	18.3	C	C
		North of Bonita Canyon Rd.	4	2,862	2,377	11.2	9.3	B	A
		Bonita Canyon Rd. to Newport Coast Dr.	4	2,896	2,687	11.9	10.5	B	A
	NB	North of SR-55 FWY	4	5,197	6,426	16.3	20.2	B	C
		North of Jamboree Rd.	3	7,750	9,584	34.3	>45.0	D	F
		South of Jamboree Rd.	3	5,242	6,482	20.6	26.1	C	D
		North of Bonita Canyon Rd.	4	2,802	3,658	11.0	14.3	A	B
		Bonita Canyon Rd. to Newport Coast Dr.	4	3,024	3,740	9.5	11.7	A	B
SR-55 FREEWAY	SB	Dyer Rd. to MacArthur Blvd.	5+1H	4,918	6,976	15.6	22.2	B	C
		MacArthur Blvd. to I-405 FWY	5+1H	4,987	7,187	15.8	22.9	B	C
		I-405 FWY to SR-73 FWY	4	3,326	4,743	10.5	15.0	A	B
		SR-73 FWY to Mesa Dr.	4	3,305	4,712	13.1	18.7	B	C
		Mesa Dr. to 22nd St./Victoria St.	3	2,830	4,035	11.2	16.0	B	B
		22nd St./Victoria St. to End	3	2,117	3,018	11.2	15.9	B	B
	NB	Dyer Rd. to MacArthur Blvd.	4+1H	12,462	10,074	>45.0	>45.0	F	F
		MacArthur Blvd. to I-405 FWY	4+1H	13,021	10,593	>45.0	>45.0	F	F
		I-405 FWY to SR-73 FWY	4	8,455	7,069	28.0	22.5	D	C
		SR-73 FWY to Mesa Dr.	4	8,400	7,023	41.6	29.6	E	D
		Mesa Dr. to 22nd St./Victoria St.	3	7,192	6,013	30.7	24.1	D	C
		22nd St./Victoria Av. to End	3	5,380	4,498	21.4	17.8	C	B

Source: Urban Crossroads 2014.
BOLD = Unacceptable Level of Service

To analyze freeway ramp junction operations, the merge/diverge analysis was performed, based on the HCM Ramps and Ramp Junctions analysis method and performed using HCS+ software. Measures of effectiveness (reported in passenger car/mile/lane) are calculated based on the existing number of travel lanes, number of lanes at the on- and off-ramps at both the analysis junction and at upstream and downstream locations (if applicable) and acceleration/deceleration lengths at each merge/diverge point. The merge/diverge analysis was based on the level of service thresholds for each density range utilized for this analysis, as summarized in Table 1-4 of the traffic study. Table 5.11-5 contains the results of the freeway ramp junction merge/diverge analysis. The table also shows the directional AM and PM peak hour freeway on-ramp and off-ramp volumes for Existing conditions, including each freeway segment lane configuration.

Table 5.11-5 Existing Conditions Freeway Ramp Junction Merge/Diverge Analysis

FREEWAY	DIRECTION	MAIN LINE SEGMENT LOCATION	LANES	VOLUME		DENSITY (cars/mile/lane)		LOS	
				AM	PM	AM	PM	AM	PM
I-405 FREEWAY	SB	SB Loop Off-Ramp at MacArthur Blvd.	2	2,313	1,154	9.1	12.5	A	B
		SB On-Ramp at MacArthur Blvd.	2	474	906	7.7	18.2	A	F4
		SB Off-Ramp at Jamboree Rd.	2	2,690	1,777	7.6	5.7	A	A
		SB Loop On Ramp at Jamboree Rd.	1	232	622	18.0	27.5	B	C
		SB On-Ramp at Jamboree Rd.	2	538	1,068	17.1	28.7	B	D
	NB	NB Loop On-Ramp at MacArthur Blvd.	1	484	1,359	23.7	24.4	C	C
		NB Off-Ramp at MacArthur Blvd.	1	1,781	706	28.2	17.2	D	B
		NB On-Ramp at Jamboree Rd.	2	1,200	1,020	23.6	19.6	C	B
		NB Loop On-Ramp at Jamboree Rd.	1	432	716	24.3	23.0	C	C
		NB Off-Ramp at Jamboree Rd.	2	1,843	1,028	22.8	12.9	C	B
SR-73 FREEWAY/TOLL ROAD	SB	SB On-Ramp at Bison Av.	1	69	344	18.2	16.6	B	B
		SB Loop Off-Ramp at Bonita Canyon Rd.	1	139	268	15.2	13.9	B	B
		SB On-Ramp at Bonita Canyon Rd.	1	173	578	14.5	15.6	B	B
		SB Off-Ramp at Newport Coast Dr.	1	263	516	17.6	18.1	B	B
		SB On-Ramp at Newport Coast Dr.	1	187	211	15.0	13.6	B	B
	NB	NB Off-Ramp at Bison Av.	1	556	117	17.5	18.7	B	B
		NB Loop On-Ramp at Bonita Canyon Rd.	1	272	109	14.8	17.0	B	B
		NB Off-Ramp at Bonita Canyon Rd.	1	494	191	8.1	9.4	A	A
		NB On-Ramp at Newport Coast Dr.	1	523	174	14.9	19.1	B	B
		NB Off-Ramp at Newport Coast Dr.	1	346	207	17.8	20.9	B	C

Source: Urban Crossroads 2014.
BOLD = Unacceptable Level of Service

Freeway ramp locations that experience deficient operations for Existing conditions are:

- I-405, SB Loop Off-Ramp at MacArthur Blvd. (AM and PM Peak Hours)
- I-405, SB On-Ramp at MacArthur Blvd. (PM Peak Hour Only)
- I-405, SB Off-Ramp at Jamboree Rd. (PM Peak Hour Only)
- I-405, SB Loop On Ramp at Jamboree Rd. (PM Peak Hour Only)
- I-405, SB On-Ramp at Jamboree Rd. (PM Peak Hour Only)

5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project could:

T-1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

T-2 Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

T-3 Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

T-4 Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

T-5 Result in inadequate emergency access.

T-6 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The following LOS thresholds are utilized by the City of Newport Beach and City of Irvine, respectively:

City of Newport Beach Thresholds

ICU analysis has been performed at study area intersections. The City of Newport Beach level of service standards for intersections are:

- LOS "D" throughout the City, unless otherwise noted.
- LOS "E" at any intersection in the Airport Area shared with Irvine.

- LOS "E" at Coast Highway (EW) and Dover Drive (NS) due to right-of-way limitations.
- LOS "E" at Marguerite Avenue (NS) and Coast Highway (EW) in the pedestrian-oriented area of Corona del Mar.
- LOS "E" at Goldenrod Avenue (NS) and Coast Highway (EW) in the pedestrian-oriented area of Corona del Mar.

At Newport Beach intersections, if the intersection would operate at unacceptable levels of service and the project contribution is 0.01 or greater, mitigation is required to bring intersection back to an acceptable level of service or to no-project conditions.

City of Irvine Thresholds

In Irvine, LOS E (peak hour ICU less than or equal to 1.00) is considered acceptable for Planning Area 36 (Irvine Business Complex/IBC) intersections. At other study area intersections in the City of Irvine, LOS D (peak hour ICU less than or equal to .90) is acceptable. At Irvine intersections, if the intersection would operate at unacceptable levels of service and the project contribution is 0.02 or greater, mitigation is required to bring intersection back to an acceptable level of service or to no project conditions.

State Highway Facility Thresholds

As stated in the Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002), an assessment of a state highway facility (SHF), is typically required when a proposed project is anticipated to contribute 1 to 49 or more peak hour trips to a SHF. Therefore, areas where the project may contribute these peak hour trips to already deficient (LOS F) freeway facilities could impact these locations.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Thresholds T-3, T-4, T-5

These impacts will not be addressed in the following analysis.

5.11.3 Environmental Impacts

2006 General Plan EIR

The 2006 General Plan EIR concludes the following with respect to transportation/circulation impacts:

- Implementation of the 2006 General Plan would contribute to a substantial impact at freeway ramps that exceeds thresholds and would result in operational deficiencies. This would be a significant and unavoidable impact.

- Implementation of the 2006 General Plan would result in a substantial increase in the number of vehicle trips, volume to capacity ratio on roads, or congestion at intersections compared to existing conditions. With improvements proposed in the Circulation Element, growth related to buildout of the proposed 2006 General Plan alone would be reduced to less than significant levels. The improvements included in the City of Newport Beach Circulation Element are detailed below (2*006 Circulation Element Improvements).*

- The 2006 General Plan would not result in a substantial impact to CMP arterials in Newport Beach. Impacts related to CMP facilities would be less than significant.

- Circulation improvements would be implemented, and no improvements would introduce new safety hazards at intersections or along roadway segments. Implementation of Circulation and Land Use policies in the 2006 General Plan would provide for increasing safety of roadways, balancing safety, quality of life, and efficiency in the design of circulation and access. Impacts would be less than significant.

- The 2006 General Plan would provide adequate emergency access to the project area, and impacts would be less than significant.

- The 2006 Circulation Element contained new policies to encourage alternatives modes of transportation, use of intelligent transportation systems, and the development of waterfront walkways. Intersection improvements would not affect implementation of these policies. The 2006 General Plan did not conflict with existing policies regarding alternative transportation, and impacts would be less than significant.

2006 Circulation Element Improvements.

Individual intersection improvements in Newport Beach in the City's 2006 General Plan Circulation Element were assumed to be implemented by 2035. Within the City of Irvine, planned improvements are expected to be in place with completion of their General Plan. It should be noted that these improvements are not necessarily funded at this time. Planned improvements would take place at the following intersections in Irvine and Newport Beach. The improvement details for each intersection are documented in Section 2.6 of the traffic study (Appendix J).

- Bluff Road (NS) at Coast Highway (EW)
- 15th Street (NS) at Coast Highway (EW)
- Newport Boulevard (NS) at Hospital Road (EW)
- Newport Boulevard (NS) at 32nd Street (EW)
- Riverside Avenue (NS) at Coast Highway (EW)
- Tustin Avenue (NS) at Coast Highway (EW)
- MacArthur Boulevard (NS) at Campus Drive (EW)
- Von Karman Avenue (NS) at Campus Drive (EW)
- Jamboree Road (NS) at Campus Drive (EW)

- Jamboree Road (NS) at Birch Street (EW)
- Campus Drive (NS) at Bristol Street North (EW)
- Irvine Avenue (NS) at Mesa Drive (EW)
- Irvine Avenue (NS) at University Drive (EW)
- MacArthur Boulevard (NS) at Jamboree Road (EW)
- Jamboree Road (NS) at Bristol Street South (EW)
- MacArthur Boulevard (NS) at Ford Road/Bonita Canyon Drive (EW)
- MacArthur Boulevard (NS) at San Joaquin Hills Road (EW)
- SR-73 NB Ramps (NS) at Bonita Canyon Drive (EW)
- Red Hill Avenue (NS) at Alton Parkway (EW)
- Von Karman Avenue (NS) at Barranca Parkway (EW)
- Jamboree Road (NS) at Barranca Parkway (EW)
- Jamboree Road (NS) at Main Street (EW)
- Jamboree Road (NS) at Michelson Drive (EW)
- Carlson Avenue (NS) at Campus Drive (EW)
- Harvard Avenue (NS) at Michelson Drive (EW)
- University Drive (NS) at Campus Drive (EW)
- MacArthur Boulevard (NS) at University Drive (EW)
- Von Karman Avenue (NS) at I-405 HOV Ramps (EW)
- Red Hill Avenue (NS) at Barranca Parkway (EW)

General Plan LUE Amendment (Proposed Project)

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

IMPACT 5.11-1: Compared to the 2006 General Plan, vehicular traffic from the proposed project would not impact levels of service for study area intersections. [Threshold T-1]

Impact Analysis: The General Plan LUE Amendment involves the alteration, intensification, and redistribution of land uses in certain subareas of the City, including major areas such as Newport Center/ Fashion Island, Newport Coast, and the Airport Area near John Wayne Airport. The proposed changes include increases and/or reductions in development capacity in these subareas. Table 5.11-6 shows the changes in trip generation (reductions and increases) associated with each area of the City where proposed General Plan LUE Amendment will adjust the development potential. The net change is an increase of 260 morning peak hour inbound trip ends, 521 morning peak hour outbound trip ends, 434 evening peak hour inbound trip ends, 324 evening peak hour outbound trip ends, and 8,221 daily trip ends.

Table 5.11-6 Project Trip Generation

Area	Area Name	Land Use Change	AM		PM		ADT
			In	Out	In	Out	
3	Westcliff Plaza	-15.514 tsf General Commercial	-28	-12	-24	-31	-593
6	Newport Coast Center	-37.875 tsf General Commercial	-67	-30	-58	-77	-1,448
7	Newport Coast Hotel	-1,001 room Hotel	-511	-170	-280	-430	-7,588
8	Bayside Center	-0.366 tsf General Commercial	-1	0	-1	-1	-14
9	Harbor View Center	-1.857 tsf General Commercial	-3	-1	-3	-4	-71
10	The Bluffs	-3.538 tsf General Commercial	-6	-3	-5	-7	-135
11	Gateway Park	-4.356 tsf General Commercial	-8	-3	-7	-9	-167
13	Newport Ridge	-356 Res-Medium (SFA)	-46	-196	-142	-75	-2,371
5	Newport Center/Fashion Island	500 du Apt. (Mid-Rise Newport Center) 175 tsf General Office 325 tsf Office (>300k block Newport Center) 50 tsf Regional Commercial	496	336	369	449	8,768
12	Harbor Day School	72 stu Elementary/Private School	13	1	3	5	94
42	Saunders Property	329 du Apartment 238.077 tsf General Office	239	220	211	221	4,651
	The Hangars	11.8 tsf General Commercial -10 tsf General Office	13	6	14	17	340
	Lyon Homes	850 du Apartment (High-Rise) 150 room Hotel 85 tsf General Commercial -250.176 tsf General Office	103	352	321	210	5,780
	UAP Companies	trip neutral land uses	0	0	0	0	0
14	150 Newport Center Dr.	125 room Hotel -8.5 tsf General Commercial	49	14	22	37	623
	100 Newport Center Dr.	15 tsf Regional Commercial	17	7	14	19	352

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Table 5.11-6 Project Trip Generation

Area	Area Name	Land Use Change	AM		PM		ADT
			In	Out	In	Out	
1	1526 Placentia	7.524 tsf General Commercial	12	3	10	14	251
2	813 East Balboa Blvd.	-2 du Res-Medium (SFA) Coastal 2 du Apartment (Res-over-Retail) 1.917 tsf Comm (Res-over-Retail)	3	1	3	3	65
		Citywide Total	260	521	434	324	8,221

Source: Urban Crossroads 2014.
1 tsf = thousand square feet

The proposed project would reduce allowable square footage, rooms, or dwelling units in eight different subareas: Westcliff Plaza, Newport Coast Center, Newport Coast Hotel, Bayside Center, Harbor View Center, The Bluffs, Gateway Park, and Newport Ridge. The most significant reduction in development capacity would be for the Newport Coast subarea, which upon approval of the amendment would allow 1,001 fewer hotel units and a reduction 37,875 square feet of neighborhood commercial use. In total, the areas proposed for reduced development capacity would reduce ADTs by 12,387.

Areas proposed for increased development capacity by increasing square footage, rooms, or dwelling units include Newport Center/Fashion Island, Harbor Day School, the Airport Area, 150 Newport Center Drive, and 100 Newport Center Drive.

- Newport Center/Fashion Island: One of the most significant changes from the existing land use plan would be in the Newport Center/Fashion Island subarea. This subarea is currently a major commercial area with a variety of existing retail, office, residential, and hotel uses. The proposed land use element amendment would increase allowable square footage for regional office space (additional 500,000 sf), regional commercial space (additional 50,000 sf), and multifamily dwelling units (additional 500 units). The increase in development capacity would generate an estimated additional 8,768 daily trips.

- Airport Area: The Airport Area is another subarea proposed for considerable changes from the existing land use plan. The project proposes changes to four properties within the subarea: Saunders Properties, The Hangars, Lyon Communities, and UAP Companies. Currently, the four properties only consist of office buildings. The proposed project would allow for increased square footage for retail and office uses as well as residential units and hotel rooms. As with Newport Center/Fashion Island, the Airport Area would allow for denser infill development and an estimated additional 10,771 daily trips.

The General Plan LUE Amendment also proposes a change of land use designation and increased development capacity for two parcels in the City: 1526 Placentia Avenue and 813 East Balboa Boulevard. These parcels are currently designated for residential uses, and the proposed changes are to general commercial and mixed-use vertical uses to allow for more diverse uses of the parcels. These changes would increase ADTs by 316.

Analysis Methodology

The Newport Beach Transportation Model (NBTM) 3.4 travel demand forecasting tool is utilized in this study to estimate long-range future traffic volumes with and without the proposed project. The NBTM is maintained for the City of Newport Beach to address traffic and circulation issues in and around the City. NBTM has recently been updated to incorporate current land use, socioeconomic, trip generation, and network data from a variety of sources, including nearby City models (Irvine, Costa Mesa, and Huntington Beach) and the Orange County Transportation Analysis Model (OCTAM). The NBTM 3.4 is a vehicle trip based modeling tool intended to be used for roadway planning and traffic impact analysis, such as the General Plan LUE Amendment analysis required by the City of Newport Beach. A more detailed discussion of the development and the capabilities of the NBTM is included in Section 1.2 of the traffic study (Urban Crossroads 2014). It should be noted that future plans for John Wayne Airport (as known during preparation

of this Draft SEIR) have been included in the background of the NBTM. Recently, preliminary work was begun on a newly proposed Airport Settlement Agreement. Because the Draft EIR is expected in early 2014 but has not been released, an update to the Airport Settlement Agreement was not assumed in the traffic impact analysis for the proposed project.

Future traffic volume forecasts for 2035 conditions in the City of Newport Beach were derived from the NBTM. For analysis locations in the City of Irvine, the Irvine Transportation Analysis Model (ITAM) Version 12 is used to forecast Post-2035 traffic volumes. Traffic volume changes associated with the General Plan LUE Amendment derived from NBTM are overlaid on ITAM 12 projections in order to evaluate project impacts in the City of Irvine.

Forecasts were provided for the 2006 General Plan and the General Plan LUE Amendment. The differences in land use designations and intensities were discussed previously and are summarized in Table 5.11-6.

2006 General Plan

The 2006 General Plan Land Use Element includes a citywide increase of approximately 8,796 residential units (23 percent growth over existing) based upon the conversion of land uses to socioeconomic data in the NBTM. For total employment, an estimated increase of 9,191 employees (12 percent growth over existing) is included in the 2006 General Plan.

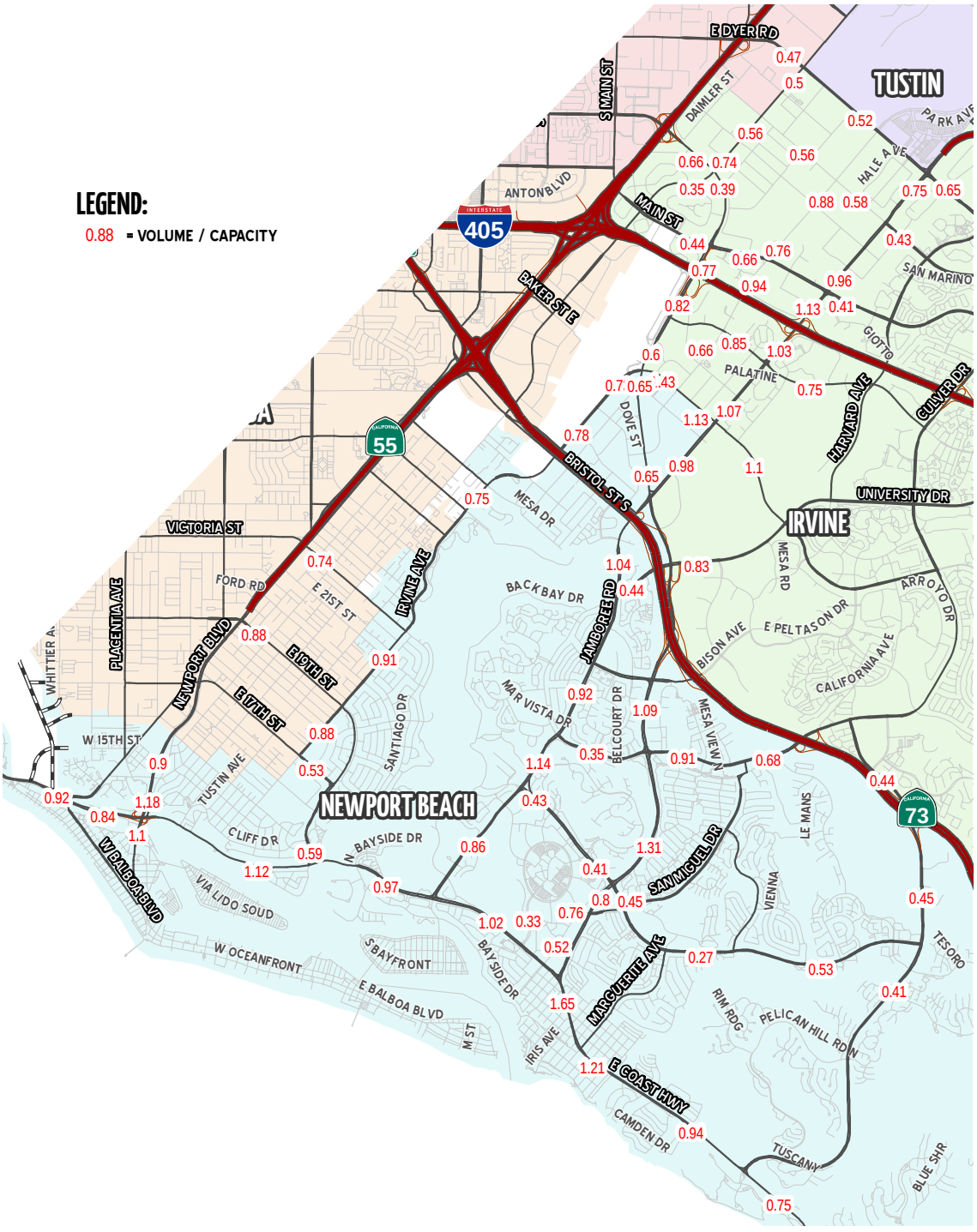
Daily Roadway Segment Operations

2006 General Plan traffic forecasts for ADT volumes are shown on Exhibit 3-A of the traffic study. Long-range future ADT V/Cs on the arterial roadway system for 2006 General Plan conditions are shown on Figure 5.11-5. Based on the ADT V/C LOS performance criteria outlined in Table 5.11-2, the following arterial segments would serve future volumes that exceed their theoretical planning level capacity under 2006 General Plan conditions:

- Newport Boulevard north of Coast Highway
- Coast Highway between Newport Boulevard and Dover Drive
- Coast Highway between MacArthur Boulevard and Marguerite Avenue
- MacArthur Boulevard between Bison Avenue and San Joaquin Hills Road
- Newport Boulevard, South of Coast Highway
- Jamboree Road, North of University Drive
- Jamboree Road, between Ford Road & San Joaquin Hills Road
- Coast Highway, between Jamboree Road & Marguerite Avenue

Figure 5.11-5

2006 General Plan V/C Ratios



Land Use Element Update

Supplemental EIR

CNB - 15.0 2/14/2014 2:45 PM

0 0.5 1 Miles

Source: Urban Crossroads, 2014

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- Coast Highway, East of Marguerite Avenue
- Jamboree Road, North of the I-405
- Jamboree Road, between Campus Drive & I-405
- Campus Drive, between MacArthur Boulevard & University Drive
- Jamboree Road, between Bison Avenue & San Joaquin Hills Road

The daily capacity of a roadway correlates to a number of widely varying factors, including traffic peaking characteristics, traffic turning volumes, and the volume of traffic on crossing streets. The actual daily capacity of a roadway can vary widely. The typical daily capacities are therefore most appropriately used as a screening tool to evaluate overall vehicular activity levels, subject to more detailed peak hour analysis at key intersections.

Intersection Peak Hour Operations

Peak hour intersection volumes for 2006 General Plan conditions are shown on Exhibits 3-B and 3-C of the traffic study for AM and PM conditions, respectively. Table 5.11-7 presents the intersection delays and LOS for the existing lane configurations and with 2006 General Plan improvements where planned.

Table 5.11-7 2006 General Plan Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1]		LOS[2]	
		AM	PM	AM	PM
1A	Bluff Rd./Coast Hwy.				
	General Plan Recommended Improvements	0.82	0.81	D	D
1B	15th St./Coast Hwy.				
	General Plan Recommended Improvements	0.84	0.85	D	D
2	Superior Av/Placentia Av.				
	Existing Lanes	0.68	0.64	B	B
3	Superior Av/Coast Hwy.				
	Existing Lanes	1.06	0.80	F	C
4	Newport Bl./Hospital Rd.				
	Existing Lanes	0.70	0.70	B	B
	General Plan Recommended Improvements	0.70	0.67	B	B
5	Newport Bl./Via Lido				
	Existing Lanes	0.46	0.37	A	A
6	Newport Bl./32nd St.				
	Existing Lanes	0.56	0.58	A	A
	General Plan Recommended Improvements	0.53	0.59	A	A

Table 5.11-7 2006 General Plan Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1] AM	ICU (V/C)[1] PM	LOS[2] AM	LOS[2] PM
7	Riverside Av./Coast Hwy.				
	Existing Lanes	1.01	0.89	F	D
	General Plan Recommended Improvements	0.76	0.89	C	D
8	Tustin Av./Coast Hwy.				
	Existing Lanes	0.97	0.77	E	C
	General Plan Recommended Improvements	0.67	0.77	B	C
9	MacArthur Bl./Campus Dr.				
	Existing Lanes	0.86	0.94	D	E
	General Plan Recommended Improvements	0.58	0.67	A	B
10	MacArthur Bl./Birch St.				
	Existing Lanes	0.53	0.65	A	B
11	Von Karman Av./Campus Dr.				
	Existing Lanes	0.75	0.81	C	D
	General Plan Recommended Improvements	0.69	0.74	B	C
12	MacArthur Bl./Von Karman Av.				
	Existing Lanes	0.64	0.56	B	A
13	Jamboree Rd./Campus Dr.				
	Existing Lanes	0.75	1.01	C	F
	General Plan Recommended Improvements	0.73	0.82	C	D
14	Jamboree Rd./Birch St.				
	Existing Lanes	0.58	0.59	A	A
	General Plan Recommended Improvements	0.50	0.48	A	A
15	Campus Dr./Bristol St. (N)				
	Existing Lanes	0.65	0.96	B	E
	General Plan Recommended Improvements	0.51	0.75	A	C
16	Birch St./Bristol St. (N)				
	Existing Lanes	0.64	0.64	B	B
17	Campus Dr./Bristol St. (S)				
	Existing Lanes	0.81	0.59	D	A
18	Birch St./Bristol St. (S)				
	Existing Lanes	0.49	0.53	A	A

Table 5.11-7 2006 General Plan Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1] AM	ICU (V/C)[1] PM	LOS[2] AM	LOS[2] PM
19	Irvine Av./Mesa Dr.				
	Existing Lanes (GP Completed)	0.55	0.65	A	B
20	Irvine Av./University Dr.				
	Existing Lanes	0.74	0.91	C	E
	General Plan Recommended Improvements	0.57	0.72	A	C
21	Irvine Av./Santiago Dr.				
	Existing Lanes	0.71	0.75	C	C
22	Irvine Av./Highland Dr.				
	Existing Lanes	0.57	0.63	A	B
23	Irvine Av./Dover Dr.				
	Existing Lanes	0.65	0.73	B	C
24	Irvine Av./Westcliff Dr.				
	Existing Lanes	0.54	0.74	A	C
25	Dover Dr./Westcliff Dr.				
	Existing Lanes	0.45	0.48	A	A
26	Dover Dr./16th St.				
	Existing Lanes	0.47	0.48	A	A
27	Dover Dr./Coast Hwy.				
	Existing Lanes	0.84	0.86	D	D
28	Bayside Dr./Coast Hwy.				
	Existing Lanes	0.79	0.86	C	D
29	MacArthur Bl./Jamboree Rd.				
	Existing Lanes	0.70	0.88	B	D
	General Plan Recommended Improvements	0.62	0.88	B	D
30	Jamboree Rd./Bristol St. (N)				
	Existing Lanes	0.48	0.67	A	B
31	Bayview Pl./Bristol St. (S)				
	Existing Lanes	0.48	0.46	A	A
32	Jamboree Rd./Bristol St. (S)				
	Existing Lanes	0.80	0.65	C	B
	General Plan Recommended Improvements	0.76	0.61	C	B

Table 5.11-7 2006 General Plan Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1] AM	ICU (V/C)[1] PM	LOS[2] AM	LOS[2] PM
33	Jamboree Rd./Bayview Wy				
	Existing Lanes	0.44	0.56	A	A
34	Jamboree Rd./University Dr.				
	Existing Lanes	0.61	0.63	B	B
35	Jamboree Rd./Bison Av.				
	Existing Lanes	0.56	0.55	A	A
36	Jamboree Rd./Ford Rd.				
	Existing Lanes	0.84	0.75	D	C
37	Jamboree Rd./San Joaquin Hills Rd.				
	Existing Lanes	0.72	0.84	C	D
38	Jamboree Rd./Santa Barbara Dr.				
	Existing Lanes	0.61	0.79	B	C
39	Jamboree Rd./Coast Hwy.				
	Existing Lanes	0.71	0.79	C	C
40	Santa Cruz Dr./San Joaquin Hills Rd.				
	Existing Lanes	0.36	0.35	A	A
41	Santa Rosa Dr./San Joaquin Hills Rd.				
	Existing Lanes	0.55	0.79	A	C
42	Newport Ctr. Dr./Coast Hwy.				
	Existing Lanes	0.42	0.53	A	A
44	Avocado Av./San Miguel Dr.				
	Existing Lanes	0.37	0.64	A	B
45	Avocado Av./Coast Hwy.				
	Existing Lanes	0.55	0.68	A	B
46	SR-73 NB/Bison Av.				
	Existing Lanes	0.74	0.57	C	A
47	SR-73 SB/Bison Av.				
	Existing Lanes	0.61	0.33	B	A
48	MacArthur Bl./Bison Av.				
	Existing Lanes	0.78	0.73	C	C

Table 5.11-7 2006 General Plan Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1] AM	ICU (V/C)[1] PM	LOS[2] AM	LOS[2] PM
49	MacArthur Bl./Ford Dr.				
	Existing Lanes	0.80	0.95	C	E
	General Plan Recommended Improvements	0.76	0.84	C	D
50	MacArthur Bl./San Joaquin Hills Rd.				
	Existing Lanes	0.63	0.84	B	D
	General Plan Recommended Improvements	0.50	0.69	A	B
51	MacArthur Bl./San Miguel Dr.				
	Existing Lanes	0.71	0.58	C	A
52	MacArthur Bl./Coast Hwy.				
	Existing Lanes	0.58	0.64	A	B
53	SR-73 NB/Bonita Canyon Dr.				
	Existing Lanes	0.71	0.62	C	B
54	SR-73 SB/Bonita Canyon Dr.				
	Existing Lanes	0.47	0.65	A	B
55	Spy Glass Hill Rd./San Miguel Dr.				
	Existing Lanes	0.34	0.43	A	A
56	San Miguel Dr./San Joaquin Hills Rd.				
	Existing Lanes	0.48	0.54	A	A
57	Goldenrod Av./Coast Hwy.				
	Existing Lanes	0.80	0.83	C	D
58	Marguerite Av./San Joaquin Hills Rd.				
	Existing Lanes	0.47	0.52	A	A
59	Marguerite Av./Coast Hwy.				
	Existing Lanes	0.79	0.72	C	C
60	Spy Glass Hill Rd./San Joaquin Hills Rd.				
	Existing Lanes	0.41	0.35	A	A
61	Poppy Av./Coast Hwy.				
	Existing Lanes	0.68	0.71	B	C
62	Newport Coast Dr./SR-73 NB				
	Existing Lanes	0.51	0.40	A	A
63	Newport Coast Dr./SR-73 SB				
	Existing Lanes	0.33	0.34	A	A

Table 5.11-7 2006 General Plan Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1] AM	ICU (V/C)[1] PM	LOS[2] AM	LOS[2] PM
64	Newport Coast Dr./San Joaquin Hills Rd.				
	Existing Lanes	0.57	0.57	A	A
65	Newport Coast Dr./Coast Hwy.				
	Existing Lanes	0.51	0.63	A	B
66	Newport Bl. (W)/Coast Hwy.				
	Existing Lanes	1.21	0.86	F	D
67	Red Hill Av./MacArthur Bl.				
	Existing Lanes	0.73	0.81	C	D
68	MacArthur Bl./Main St.				
	Existing Lanes	0.61	0.83	B	D
69	MacArthur Bl./I-405 NB Ramps				
	Existing Lanes	0.68	0.67	B	B
70	MacArthur Bl./I-405 SB Ramps				
	Existing Lanes	0.61	0.77	B	C
71	MacArthur Bl./Michelson Dr.				
	Existing Lanes	0.68	0.88	B	D
72	Von Karman Av./Barranca Pkwy.				
	Existing Lanes	0.85	1.07	D	F
	General Plan Recommended Improvements	0.72	0.90	C	D
73	Von Karman Av./Alton Pkwy.				
	Existing Lanes	0.84	0.98	D	E
	With ATMS Improvements[5]	0.79	0.93	C	E
74	Von Karman Av./Main St.				
	Existing Lanes	0.70	0.94	B	E
76	Von Karman Av./Michelson Dr.				
	Existing Lanes	0.76	0.94	C	E
77	Jamboree Rd./Barranca Pkwy.				
	Existing Lanes	0.85	1.01	D	F

Table 5.11-7 2006 General Plan Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1]		LOS[2]	
		AM	PM	AM	PM
	General Plan Recommended Improvements	0.85	0.93	D	E
78	Jamboree Rd./Alton Pkwy.				
	Existing Lanes	0.81	0.85	D	D
79	Jamboree Rd./Main St.				
	Existing Lanes	0.80	0.89	C	D
	General Plan Recommended Improvements	0.72	0.82	C	D
80	Jamboree Rd./I-405 NB Ramps				
	Existing Lanes	0.74	0.86	C	D
81	Jamboree Rd./I-405 SB Ramps				
	Existing Lanes	0.93	0.73	E	C
82	Jamboree Rd./Michelson Dr.				
	Existing Lanes	0.95	1.08	E	F
	General Plan Recommended Improvements	0.95	1.06	E	F
83	Carlson Av./Michelson Dr.				
	Existing Lanes	0.76	0.87	C	D
84	Carlson Av./Campus Dr.				
	Existing Lanes	0.98	1.11	E	F
	General Plan Recommended Improvements	0.65	0.76	B	C
85	Red Hill Av./Barranca Pkwy.				
	Existing Lanes	0.59	0.76	A	C
86	Red Hill Av./Alton Pkwy.				
	Existing Lanes	1.07	1.26	F	F
	General Plan Recommended Improvements	0.83	0.86	D	D
87	Harvard Av./Michelson Dr.				
	Existing Lanes	0.67	0.89	B	D
	General Plan Recommended Improvements	0.67	0.81	B	D
88	Harvard Av./University Dr.				
	Existing Lanes	0.75	0.83	C	D
89	University Dr./Campus Dr.				
	Existing Lanes	0.99	1.18	E	F
	General Plan Recommended Improvements	0.73	0.87	C	D

Table 5.11-7 2006 General Plan Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1]		LOS[2]	
		AM	PM	AM	PM
90	MacArthur Bl. (NB)/University Dr.				
	Existing Lanes	0.63	0.72	B	C
	General Plan Improvements	0.63	0.72	B	C
91	MacArthur Bl. (SB)/University Dr.				
	Existing Lanes	0.71	0.62	C	B
92	Fairchild Rd./MacArthur Bl.				
	Existing Lanes	0.69	0.72	B	C
93	Jamboree Rd./Fairchild Rd.				
	Existing Lanes	0.64	0.69	B	B

Source: Urban Crossroads, 2014
[1] V/C=Volume per Capacity Ratio
[2] Level of Service (LOS) is calculated based on the Intersection Capacity Utilization (ICU) method.
[3] Bold shows a deficiency
[4] If a box is shaded, LOS"E" is acceptable.
[5] ATMS improvements are discussed in Section 4.5 of the Traffic Study.

Based on the intersection LOS performance criteria, the following study area intersections experienced unacceptable operations during peak hours for 2006 General Plan conditions using existing lanes.

- Riverside Avenue at Coast Highway (AM)
- Campus Drive at Bristol Street N (PM)
- Tustin Avenue at Coast Highway (AM)
- Jamboree Road at Campus Drive (PM)
- Irvine Avenue at University Drive (PM)
- MacArthur Boulevard at Ford Drive (PM)
- Von Karman Avenue at Barranca Parkway (AM)
- Jamboree Road at Barranca Parkway (PM)
- Carlson Avenue at Campus Drive (PM)
- Red Hill Avenue at Alton Parkway (AM & PM)
- University Drive at Campus Drive (AM & PM)
- Superior Avenue at Coast Highway (AM)
- Newport Boulevard (West) at Coast Highway (AM)
- Jamboree Road at Michelson Drive (PM)

2006 General Plan improvements previously listed would mitigate 11 of the 14 deficient intersections. The 3 intersections below would remain deficient with the anticipated 2006 General Plan improvements.

- Superior Avenue at Coast Highway (AM)
- Newport Boulevard (West) at Coast Highway (AM)
- Jamboree Road at Michelson Drive (PM)

General Plan LUE Amendment Scenario and Project Impacts

The following presents the results of the analysis for the General Plan LUE Amendment, which includes increases and/or reductions in development capacity in various subareas. The areas proposed for increased/decreased development capacity were listed previously and summarized in Table 5.11-6.

Daily Roadway Segment Operations

General Plan LUE Amendment traffic forecasts for ADT volumes are shown on Exhibit 4-A of the traffic study. Long-range future ADT V/C ratios on the arterial roadway system for the General Plan LUE Amendment scenario are shown on Figure 5.11-6. Based on the ADT V/C LOS performance criteria outlined in Table 5.11-2, the following arterial segments would serve future volumes that exceed their theoretical planning level capacity under the General Plan LUE Amendment scenario:

- Newport Boulevard north of Coast Highway
- Coast Highway between Newport Boulevard and Dover Drive
- Coast Highway between MacArthur Boulevard and Marguerite Avenue
- MacArthur Boulevard between Bison Avenue and San Joaquin Hills Road
- Newport Boulevard, South of Coast Highway
- Jamboree Road, North of University Drive
- Jamboree Road, between Ford Road & San Joaquin Hills Road
- Coast Highway, between Jamboree Road & Marguerite Avenue
- Coast Highway, East of Marguerite Avenue
- Jamboree Road, North of the I-405
- Jamboree Road, between Campus Drive & I-405
- Campus Drive, between MacArthur Boulevard & University Drive
- Jamboree Road, between Bison Avenue & San Joaquin Hills Road

These are the same segments identified under 2006 General Plan conditions. As discussed previously, the daily roadway capacities are used as a screening tool, and detailed analysis are performed at the peak hour intersection operation level. There is no threshold of significance related to roadway segment performance. No significant impacts are identified at roadway segments.

Intersection Peak Hour Operations

Peak hour intersection volumes for 2006 General Plan conditions are shown on Exhibits 4-B and 4-C of the traffic study for AM and PM conditions, respectively. Table 5.11-8 presents the intersection peak hour delays and levels of service for General Plan LUE Amendment conditions.

Table 5.11-8 General Plan LUE Amendment Conditions Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1]		LOS[2]	
		AM	PM	AM	PM
2	Superior Av/Placentia Av.				
	Existing Lanes	0.66	0.63	B	B
3	Superior Av/Coast Hwy.				
	Existing Lanes	1.05	0.79	F	C
4	Newport Bl./Hospital Rd.				
	Existing Lanes	0.68	0.73	B	C
5	Newport Bl./Via Lido				
	Existing Lanes	0.46	0.37	A	A
6	Newport Bl./32nd St.				
	Existing Lanes	0.56	0.58	A	A
	General Plan Recommended Improvements	0.53	0.59	A	A
7	Riverside Av./Coast Hwy.				
	Existing Lanes	0.97	0.88	E	D
	General Plan Recommended Improvements	0.73	0.88	C	D
8	Tustin Av./Coast Hwy.				
	Existing Lanes	0.92	0.75	E	C
	General Plan Recommended Improvements	0.64	0.75	B	C
9	MacArthur Bl./Campus Dr.				
	Existing Lanes	0.93	0.97	E	E
	General Plan Recommended Improvements	0.62	0.70	B	B
10	MacArthur Bl./Birch St.				
	Existing Lanes	0.57	0.71	A	C
11	Von Karman Av./Campus Dr.				
	Existing Lanes	0.71	0.81	C	D
	General Plan Recommended Improvements	0.66	0.74	B	C
12	MacArthur Bl./Von Karman Av.				
	Existing Lanes	0.62	0.58	B	A
13	Jamboree Rd./Campus Dr.				
	Existing Lanes	0.74	1.01	C	F
	General Plan Recommended Improvements	0.73	0.83	C	D

Table 5.11-8 General Plan LUE Amendment Conditions Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1]		LOS[2]	
		AM	PM	AM	PM
14	Jamboree Rd./Birch St.				
	Existing Lanes	0.63	0.61	B	B
	General Plan Recommended Improvements	0.55	0.50	A	A
15	Campus Dr./Bristol St. (N)				
	Existing Lanes	0.65	0.93	B	E
	General Plan Recommended Improvements	0.50	0.73	A	C
16	Birch St./Bristol St. (N)				
	Existing Lanes	0.60	0.64	A	B
17	Campus Dr./Bristol St. (S)				
	Existing Lanes	0.79	0.59	C	A
18	Birch St./Bristol St. (S)				
	Existing Lanes	0.49	0.53	A	A
19	Irvine Av./Mesa Dr.				
	Existing Lanes	0.58	0.62	A	B
20	Irvine Av./University Dr.				
	Existing Lanes	0.74	0.93	C	E
	General Plan Improvements	0.57	0.74	A	C
21	Irvine Av./Santiago Dr.				
	Existing Lanes	0.71	0.74	C	C
22	Irvine Av./Highland Dr.				
	Existing Lanes	0.58	0.63	A	B
23	Irvine Av./Dover Dr.				
	Existing Lanes	0.67	0.73	B	C
24	Irvine Av./Westcliff Dr.				
	Existing Lanes	0.54	0.74	A	C
25	Dover Dr./Westcliff Dr.				
	Existing Lanes	0.46	0.48	A	A
26	Dover Dr./16th St.				
	Existing Lanes	0.47	0.48	A	A
27	Dover Dr./Coast Hwy.				
	Existing Lanes	0.82	0.84	D	D

Table 5.11-8 General Plan LUE Amendment Conditions Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1]		LOS[2]	
		AM	PM	AM	PM
28	Bayside Dr./Coast Hwy.				
	Existing Lanes	0.76	0.84	C	D
29	MacArthur Bl./Jamboree Rd.				
	Existing Lanes	0.72	0.89	C	D
	General Plan Recommended Improvements	0.64	0.89	B	D
30	Jamboree Rd./Bristol St. (N)				
	Existing Lanes	0.49	0.67	A	B
31	Bayview Pl./Bristol St. (S)				
	Existing Lanes	0.48	0.47	A	A
32	Jamboree Rd./Bristol St. (S)				
	Existing Lanes	0.81	0.66	D	B
	General Plan Recommended Improvements	0.77	0.62	C	B
33	Jamboree Rd./Bayview Wy.				
	Existing Lanes	0.44	0.57	A	A
34	Jamboree Rd./University Dr.				
	Existing Lanes	0.64	0.64	B	B
35	Jamboree Rd./Bison Av.				
	Existing Lanes	0.59	0.58	A	A
36	Jamboree Rd./Ford Rd.				
	Existing Lanes	0.87	0.76	D	C
37	Jamboree Rd./San Joaquin Hills Rd.				
	Existing Lanes	0.76	0.87	C	D
38	Jamboree Rd./Santa Barbara Dr.				
	Existing Lanes	0.64	0.87	B	D
39	Jamboree Rd./Coast Hwy.				
	Existing Lanes	0.70	0.78	B	C
40	Santa Cruz Dr./San Joaquin Hills Rd.				
	Existing Lanes	0.38	0.35	A	A
41	Santa Rosa Dr./San Joaquin Hills Rd.				
	Existing Lanes	0.60	0.80	A	C

Table 5.11-8 General Plan LUE Amendment Conditions Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1]		LOS[2]	
		AM	PM	AM	PM
42	Newport Ctr. Dr./Coast Hwy.				
	Existing Lanes	0.43	0.54	A	A
44	Avocado Av./San Miguel Dr.				
	Existing Lanes	0.38	0.66	A	B
45	Avocado Av./Coast Hwy.				
	Existing Lanes	0.54	0.66	A	B
46	SR-73 NB/Bison Av.				
	Existing Lanes	0.73	0.56	C	A
47	SR-73 SB/Bison Av.				
	Existing Lanes	0.61	0.33	B	A
48	MacArthur Bl./Bison Av.				
	Existing Lanes	0.78	0.74	C	C
49	MacArthur Bl./Ford Dr.				
	Existing Lanes	0.80	0.96	C	E
	General Plan Recommended Improvements	0.76	0.85	C	D
50	MacArthur Bl./San Joaquin Hills Rd.				
	Existing Lanes	0.64	0.85	B	D
	General Plan Recommended Improvements	0.51	0.70	A	B
51	MacArthur Bl./San Miguel Dr.				
	Existing Lanes	0.74	0.59	C	A
52	MacArthur Bl./Coast Hwy.				
	Existing Lanes	0.58	0.66	A	B
53	SR-73 NB/Bonita Canyon Dr.				
	Existing Lanes	0.66	0.58	B	A
54	SR-73 SB/Bonita Canyon Dr.				
	Existing Lanes	0.45	0.60	A	A
55	Spy Glass Hill Rd./San Miguel Dr.				
	Existing Lanes	0.34	0.44	A	A
56	San Miguel Dr./San Joaquin Hills Rd.				
	Existing Lanes	0.48	0.52	A	A

Table 5.11-8 General Plan LUE Amendment Conditions Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1]		LOS[2]	
		AM	PM	AM	PM
57	Goldenrod Av./Coast Hwy.				
	Existing Lanes	0.84	0.84	D	D
58	Marguerite Av./San Joaquin Hills Rd.				
	Existing Lanes	0.42	0.48	A	A
59	Marguerite Av./Coast Hwy.				
	Existing Lanes	0.84	0.75	D	C
60	Spy Glass Hill Rd./San Joaquin Hills Rd.				
	Existing Lanes	0.39	0.35	A	A
61	Poppy Av./Coast Hwy.				
	Existing Lanes	0.70	0.71	B	C
62	Newport Coast Dr./SR-73 NB				
	Existing Lanes	0.48	0.33	A	A
63	Newport Coast Dr./SR-73 SB				
	Existing Lanes	0.33	0.31	A	A
64	Newport Coast Dr./San Joaquin Hills Rd.				
	Existing Lanes	0.62	0.57	B	A
65	Newport Coast Dr./Coast Hwy.				
	Existing Lanes	0.47	0.55	A	A
66	Newport Bl. (W)/Coast Hwy.				
	Existing Lanes	1.21	0.86	F	D
67	Red Hill Av./MacArthur Bl.				
	Existing Lanes	0.76	0.83	C	D
68	MacArthur Bl./Main St.				
	Existing Lanes	0.63	0.84	B	D
69	MacArthur Bl./I-405 NB Ramps				
	Existing Lanes	0.69	0.66	B	B
70	MacArthur Bl./I-405 SB Ramps				
	Existing Lanes	0.63	0.79	B	C
71	MacArthur Bl./Michelson Dr.				
	Existing Lanes	0.70	0.90	B	D

Table 5.11-8 General Plan LUE Amendment Conditions Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1]		LOS[2]	
		AM	PM	AM	PM
72	Von Karman Av./Barranca Pkwy.				
	Existing Lanes	0.85	1.07	D	F
	General Plan Recommended Improvements	0.72	0.89	C	D
73	Von Karman Av./Alton Pkwy.				
	Existing Lanes	0.91	1.02	E	F
	With ATMS Improvements[5]	0.86	0.97	D	E
74	Von Karman Av./Main St.				
	Existing Lanes	0.70	0.93	B	E
76	Von Karman Av./Michelson Dr.				
	Existing Lanes	0.77	0.94	C	E
77	Jamboree Rd./Barranca Pkwy.				
	Existing Lanes	0.85	1.01	D	F
	General Plan Recommended Improvements	0.85	0.92	D	E
78	Jamboree Rd./Alton Pkwy.				
	Existing Lanes	0.81	0.86	D	D
79	Jamboree Rd./Main St.				
	Existing Lanes	0.79	0.89	C	D
	General Plan Recommended Improvements	0.71	0.82	C	D
80	Jamboree Rd./I-405 NB Ramps				
	Existing Lanes	0.75	0.87	C	D
81	Jamboree Rd./I-405 SB Ramps				
	Existing	0.92	0.74	E	C
82	Jamboree Rd./Michelson Dr.				
	Existing Lanes	0.95	1.07	E	F
	General Plan Recommended Improvements	0.95	1.05	E	F
83	Carlson Av./Michelson Dr.				
	Existing Lanes	0.77	0.89	C	D
84	Carlson Av./Campus Dr.				
	Existing Lanes	0.98	1.10	E	F
	General Plan Recommended Improvements	0.65	0.76	B	C

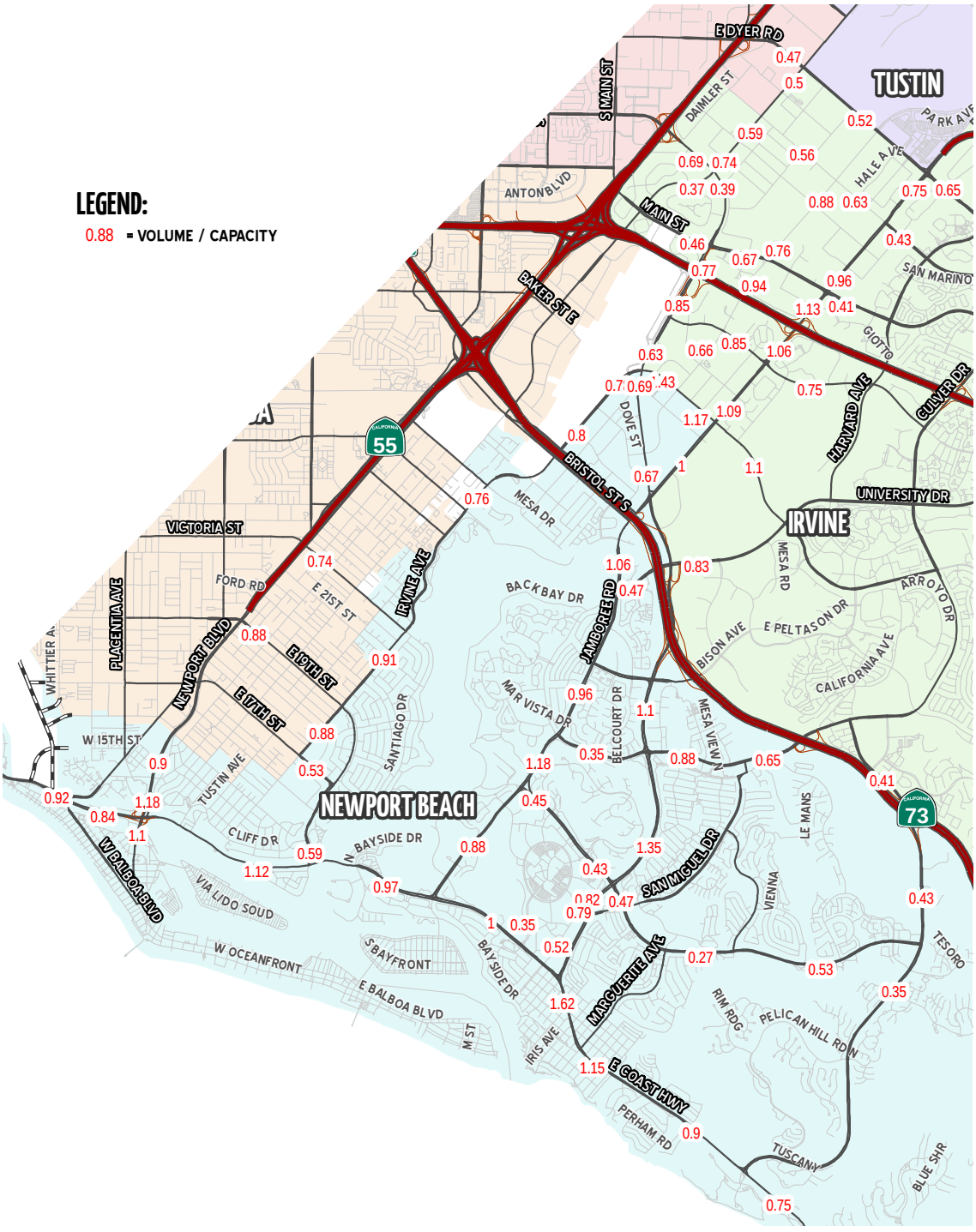
Table 5.11-8 General Plan LUE Amendment Conditions Intersection Peak Hour Delays and Levels of Service

ID	Intersection	ICU (V/C)[1] AM	ICU (V/C)[1] PM	LOS[2] AM	LOS[2] PM
85	Red Hill Av./Barranca Pkwy.				
	Existing Lanes	0.60	0.75	A	C
86	Red Hill Av./Alton Pkwy.				
	Existing Lanes	1.06	1.27	F	F
	General Plan Recommended Improvements	0.84	0.87	D	D
87	Harvard Av./Michelson Dr.				
	Existing Lanes	0.68	0.89	B	D
	General Plan Recommended Improvements	0.68	0.81	B	D
88	Harvard Av./University Dr.				
	Existing Lanes	0.76	0.83	C	D
89	University Dr./Campus Dr.				
	Existing Lanes	1.00	1.17	E	F
	General Plan Recommended Improvements	0.73	0.87	C	D
90	MacArthur Bl. (NB)/University Dr.				
	Existing Lanes	0.64	0.72	B	C
	General Plan Improvements	0.64	0.72	B	C
91	MacArthur Bl. (SB)/University Dr.				
	Existing Lanes	0.73	0.62	C	B
92	Fairchild Rd./MacArthur Bl.				
	Existing Lanes	0.70	0.72	B	C
93	Jamboree Rd./Fairchild Rd.				
	Existing Lanes	0.65	0.68	B	B

Source: Urban Crossroads, 2014
[1] V/C=Volume per Capacity Ratio
[2] Level of Service (LOS) is calculated based on the Intersection Capacity Utilization (ICU) method.
[3] **Bold** shows a deficiency
[4] If a box is shaded, LOS "E" is acceptable.
[5] ATMS improvements are discussed in Section 4.5 of the Traffic Study.

Figure 5.11-6

General Plan LUE Amendment V/C Ratios



Land Use Element Update

Supplemental EIR

CNB - 15.0 2/14/2014 2:45 PM

0 0.5 1 Miles

Source: Urban Crossroads, 2014

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TRANSPORTATION AND TRAFFIC

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Intersection Operations without Improvements

Based on the intersection LOS performance criteria, the following study area intersections would experience unacceptable operations during peak hours for General Plan LUE Amendment conditions using existing lanes.

- Tustin Avenue at Coast Highway (AM)
- Campus Drive at Bristol Street N (PM)
- Riverside Avenue. At Coast Highway (AM)Jamboree Road at Campus Drive (PM)
- Irvine Avenue at University Drive (PM)
- MacArthur Boulevard at Ford Drive (PM)
- Von Karman Avenue at Barranca Parkway (AM)
- Jamboree Road at Barranca Parkway (PM)
- Carlson Avenue at Campus Drive (PM)
- Red Hill Avenue at Alton Parkway (AM & PM)
- University Drive at Campus Drive (AM & PM)
- Superior Avenue at Coast Highway (AM)
- Newport Boulevard (West) at Coast Highway (AM)
- Jamboree Road at Michelson Drive (PM)
- Von Karman Avenue at Alton Parkway (PM)

As previously discussed, a significant impact would occur if an intersection would (1) operate at unacceptable level of service, and (2) the project contribution would be 0.01 or greater for a Newport Beach intersection, 0.02 or greater at an Irvine intersection, or 0.03 or greater at a CMP intersection. Table 5.11-9 summarizes the deficient intersections without improvements and V/C increases for both scenarios. Based on the criteria above, significant impacts would occur at the intersections of:

- Irvine Avenue at University Drive (PM)
- Von Karman Avenue at Alton Parkway(PM)
- MacArthur Boulevard at Ford Drive (PM)

Table 5.11-9 Intersection Impact Summary without Improvements

Intersection	Peak Hour Delay (sec)				V/C increase	
	Baseline		Project			
	AM	PM	AM	PM	AM	PM
Superior Av/Coast Hwy.	1.06	0.80	1.05	0.79	-0.01	-0.01
Riverside Av./Coast Hwy.	1.01	0.89	0.97	0.88	-0.04	-0.01
Tustin Av./Coast Hwy.	0.97	0.77	0.92	0.75	-0.05	-0.02
Jamboree Rd./Campus Dr.	0.75	1.01	0.74	1.01	-0.01	0.00
Irvine Av./University Dr.	0.74	**0.91**	0.74	**0.93**	0.00	**0.02**
MacArthur Bl./Ford Dr.	0.80	**0.95**	0.80	**0.96**	0.00	**0.01**
Von Karman Av./Barranca Pkwy.	0.85	1.07	0.85	1.07	0.00	0.00
Von Karman Av./Alton Pkwy.	0.84	**0.98**	0.91	**1.02**	0.07	**0.04**
Jamboree Rd./Barranca Pkwy.	0.85	1.01	0.85	1.01	0.00	0.00
Newport Blvd./Coast Hwy.	1.21	0.86	1.21	0.86	0.00	0.00
Jamboree Rd./Michelson Dr.	0.95	1.08	0.95	1.07	0.00	-0.01
Carlson Av./Campus Dr.	0.98	1.11	0.98	1.10	0.00	-0.01
Red Hill Av./Alton Pkwy.	1.07	1.26	1.06	1.27	-0.01	0.01
University Dr./Campus Dr.	0.99	1.18	1.00	1.17	0.01	-0.01

Notes: Based on results provided in Tables 3-1 and 4-6 of the Traffic Impact Analysis prepared by Urban Crossroads.
Bold shows when deficiencies and increases that caused the significant impact occurred.

The analysis above was performed to illustrate the potential impacts and deficiencies at intersections with existing lane configurations. Intersection improvements are anticipated at several study area intersections listed previously. As stated in the City of Newport Beach Circulation Element, the City receives funding from gasoline tax apportionment, county, state, and federal funds and the Traffic Phasing Ordinance, Fair Share Ordinance, and the General Fund. The City's Traffic Phasing Ordinance requires developer funding of a proportional share of intersection improvements when a proposed project has a direct negative impact on the level of service at that intersection. This ordinance phases intersection improvements with development to maintain the City's standards for level of traffic service. The City's Fair Share Ordinance, which was adopted in 1984, establishes a fee based upon the unfunded cost to implement the Master Plan of Streets and Highways to be paid in conjunction with the issuance of a building permit. The Circulation Element includes the necessary improvements to mitigate the significant impacts associated with the project at the Newport Beach intersections. The following discusses potential impacts with the implementation of intersection improvements.

Intersection Operations With Improvements

When the anticipated intersection improvements are implemented, the following three intersections would continue to operate at unacceptable LOS even with the anticipated improvements:

- Superior Avenue at Coast Highway (AM)
- Newport Boulevard (West) at Coast Highway (AM)
- Jamboree Road at Michelson Drive (PM)

Table 5.11-10 summarizes the deficient intersections and V/C increases with the anticipated intersection improvements. It should be noted that for the intersection of Von Karman Avenue at Alton Parkway, AM and PM peak hour Intersection Capacity Utilization (ICU) analysis has been performed without and with the Advanced Transportation Management Systems (ATMS) improvements that are already planned by the City of Irvine at this location. Without ATMS improvements, the intersection is anticipated to experience 0.91 (LOS D) operations in the AM peak hour and 1.02 (LOS F) operations in the PM peak hour, as presented in Table 5.11-9. Without the additional capacity allowed by the ATMS, there is a PM peak hour impact with the General Plan LUE Amendment (proposed project). With ATMS improvements, the intersection is anticipated to experience 0.86 (LOS D) operations in the AM peak hour and 0.97 (LOS E) operations in the PM peak hour. The final intersection operation with currently planned improvements is not deficient, and no impact occurs.

The General Plan LUE Amendment results in the redistribution of peak hour directional traffic movements that generally do not degrade roadway system performance in comparison to the 2006 General Plan. In summary, based on the intersection impact criteria previously described, there would be no significant impacts with the planned improvements at study-area intersections.

Table 5.11-10 Intersection Impact Summary with Improvements

	Peak Hour Delay (sec)				V/C increase	
	Baseline		Project			
Intersection	AM	PM	AM	PM	AM	PM
Superior Av/Coast Hwy.	1.06	0.80	1.05	0.79	-0.01	-0.01
Newport Blvd./Coast Hwy.	1.21	0.86	1.21	0.86	0.00	0.00
Jamboree Rd./Michelson Dr.	0.95	1.06	0.95	1.05	0.00	-0.01

Notes: Based on results provided in Tables 3-1 and 4-6 of the Traffic Impact Analysis prepared by Urban Crossroads.
Bold shows when deficiencies and increases that caused the significant impact occurred.

IMPACT 5.11-2: Vehicular traffic from the proposed project with the cumulative Irvine sensitivity analysis scenario would not impact levels of service for study area intersections in Irvine. [Threshold T-1]

Impact Analysis: At the request of the City of Irvine, an additional scenario has been developed for intersections in Irvine. A special model run was developed for a cumulative scenario for use in comparison when evaluating the General Plan LUE Amendment. The cumulative scenario includes known potential projects in Irvine, including:

- Compos Verdes (previous ITC), located in the northwest corner Jamboree Road & Campus Drive, 1,600 residential dwelling units and 17,000 square feet of retail.
- Milani Apartments, located at18831 Von Karman, 287 residential dwelling units.
- 2772 Main Street and 2699 & 2719 White, 362 residential dwelling units.

City of Irvine cumulative AM and PM peak hour ICU values are summarized in Table 4-10 of the traffic study. Table 5.11-11 presents the comparison of 2006 General Plan and General Plan LUE Amendment AM and PM peak hour ICU values. All calculations for sensitivity analysis included 2006 General Plan improvements. The intersection of Jamboree Road at Michelson Drive (in the PM peak hour) experiences unacceptable operations under the Cumulative scenario. Under the Cumulative with Project scenario, the intersections of Jamboree Road at Michelson Drive, and Von Karman Avenue/Alton Parkway would experience unacceptable LOS. However, V/C increases at these locations would be below thresholds; therefore, impacts would be less than significant.

Table 5.11-11 City of Irvine Sensitivity Analysis Intersection Impact Summary

		2006 General Plan with Irvine Cumulative Projects				General Plan LUE Amendment with Irvine Cumulative Projects				Difference			
		ICU (V/C)		LOS		ICU (V/C)		LOS		ICU (V/C)		LOS CHANGE	
ID	Intersection	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
67	Red Hill Av./MacArthur Bl.	0.73	0.81	C	D	0.75	0.84	C	D	0.02	0.03	-	-
68	MacArthur Bl./Main St.	0.63	0.85	B	D	0.64	0.86	B	D	0.01	0.01	-	-
69	MacArthur Bl./I-405 NB Ramps	0.68	0.68	B	B	0.69	0.67	B	B	0.01	-0.01	-	-
70	MacArthur Bl./I-405 SB Ramps	0.61	0.77	B	C	0.63	0.79	B	C	0.02	0.02	-	-
71	MacArthur Bl./Michelson Dr.	0.68	0.89	B	D	0.70	0.90	B	D	0.02	0.01	-	-
72	Von Karman Av./Barranca Pkwy.	0.73	0.89	C	D	0.72	0.90	C	D	-0.01	0.01	-	-
73	Von Karman Av./Alton Pkwy.	0.81	0.94	D	E	0.85	0.99	D	E	0.04	0.05	-	-
74	Von Karman Av./Main St.	0.72	0.95	C	E	0.72	0.94	C	E	0.00	-0.01	-	-
75	Von Karman Av./I-405 HOV Ramps	0.74	0.68	C	B	0.72	0.69	C	B	-0.02	0.01	-	-
76	Von Karman Av./Michelson Dr.	0.75	0.95	C	E	0.77	0.95	C	E	0.02	0.00	-	-
77	Jamboree Rd./Barranca Pkwy.	0.85	0.92	D	E	0.86	0.92	D	E	0.01	0.00	-	-
78	Jamboree Rd./Alton Pkwy.	0.80	0.86	C	D	0.81	0.87	D	D	0.01	0.01	Yes	-
79	Jamboree Rd./Main St.	0.72	0.82	C	D	0.72	0.82	C	D	0.00	0.00	-	-
80	Jamboree Rd./I-405 NB Ramps	0.75	0.87	C	D	0.75	0.87	C	D	0.00	0.00	-	-
81	Jamboree Rd./I-405 SB Ramps	0.93	0.74	E	C	0.93	0.74	E	C	0.00	0.00	-	-
82	Jamboree Rd./Michelson Dr.	0.95	1.07	E	F	0.95	1.06	E	F	0.00	-0.01	-	-
83	Carlson Av./Michelson Dr.	0.77	0.87	C	D	0.78	0.90	C	D	0.01	0.03	-	-
84	Carlson Av./Campus Dr.	0.63	0.76	B	C	0.63	0.76	B	C	0.00	0.00	-	-
85	Red Hill Av./Barranca Pkwy.	0.59	0.77	A	C	0.60	0.75	A	C	0.01	-0.02	-	-

5. Environmental Analysis
TRANSPORTATION AND TRAFFIC

Table 5.11-11 City of Irvine Sensitivity Analysis Intersection Impact Summary

		2006 General Plan with Irvine Cumulative Projects				General Plan LUE Amendment with Irvine Cumulative Projects				Difference			
		ICU (V/C)		LOS		ICU (V/C)		LOS		ICU (V/C)		LOS CHANGE	
ID	Intersection	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
86	Red Hill Av./Alton Pkwy.	0.83	0.86	D	D	0.85	0.87	D	D	0.02	0.01	-	-
87	Harvard Av./Michelson Dr.	0.68	0.82	B	D	0.68	0.82	B	D	0.00	0.00	-	-
88	Harvard Av./University Dr.	0.76	0.83	C	D	0.77	0.83	C	D	0.01	0.00	-	-
89	University Dr./Campus Dr.	0.74	0.87	C	D	0.74	0.87	C	D	0.00	0.00	-	-
90	MacArthur Bl. (NB)/University Dr.	0.63	0.72	B	C	0.64	0.73	B	C	0.01	0.01	-	-
91	MacArthur Bl. (SB)/University Dr.	0.71	0.63	C	B	0.72	0.63	C	B	0.01	0.00	-	-
92	Fairchild Rd./MacArthur Bl.	0.70	0.72	B	C	0.71	0.72	C	C	0.01	0.00	Yes	-
93	Jamboree Rd./Fairchild Rd.	0.65	0.69	B	B	0.66	0.70	B	B	0.01	0.01	-	-

Source: Urban Crossroads 2014
Bold=deficient intersection
If a box is shaded, LOS "E" is acceptable.
The intersection of Von Karman Av at Alton Pkwy includes the V/C correction for ATMS.

IMPACT 5.11-3: Vehicular traffic from the proposed project in conjunction with the Airport Settlement Agreement scenario could impact levels of service for study area intersections. [Threshold T-1]

Impact Analysis: The County of Orange is currently preparing an EIR to analyze potential impacts associated with the proposed amendment of the Airport Settlement Agreement. The proposed amendment for the Airport Settlement Agreement would expand the number of annual passengers and average daily departures from January 1, 2021, to December 31, 2035. The EIR will evaluate the transportation impacts, and the NOP/IS identified that the increased number of flights would result in a greater number of automobiles and buses providing access to the airport. The increased number of vehicles may result in traffic congestion and deterioration of level of service on the roadways surrounding the airport. However, until the EIR analysis is completed, it is not possible and premature to identify with reasonable precision the potential environmental effects. Therefore, for the purpose of this analysis, at the time of the writing of this Draft SEIR, it is assumed that impacts at study area intersections would be significant and unavoidable.

IMPACT 5.11-4: Vehicular traffic from the proposed project without the 19th Street Bridge scenario would not impact levels of service for study area intersections. [Threshold T-1]

Impact Analysis: OCTA maintains the Master Plan of Arterial Highways (MPAH) for Orange County. Similar to the City of Newport Beach General Circulation Element, the MPAH is the planned roadway system for the County of Orange. The MPAH has recently been modified by OCTA to eliminate the 19th Street Bridge over the Santa Ana River, which used to provide a connection from the current 19th Street terminus to Brookhurst Street in Huntington Beach. The 19th Street Bridge is included in the current Newport Beach Circulation Element and was included in the NBTM for all previous scenarios. In the future, a complete update to the Circulation Element is expected. In considering City-wide refinements to the roadway system, it is likely that removal of the 19th Street Bridge would be among the changes considered.

Recent analysis completed for OCTA to evaluate potential elimination of the 19th Street Bridge indicated that impacts in Newport Beach were limited to the intersection of Superior Avenue at Coast Highway. This intersection is deficient for General Plan conditions with and without the General Plan LUE Amendment Project. Because the General Plan LUE Amendment proposes only reduced development and minor changes in land use designations in the West Newport area, it is likely that there would be no change in the traffic findings if an analysis is completed without the 19th Street Bridge.

The intersection of Superior Avenue at Coast Highway is deficient for General Plan conditions with and without the General Plan LUE Amendment, but a project impact has not been identified. It is likely that this finding would remain if the 19th Street Bridge was not included in this evaluation of the General Plan LUE Amendment. Therefore, in a scenario without the 19th Street bridge crossing, impacts at study area intersections would be less than significant.

IMPACT 5.11-5: Project-related trip generation would worsen operations at freeway main line segments and ramps operating at unacceptable levels of service. [Threshold T-1]

Analysis of intersections at state freeway ramps, freeway main line segments and freeway-to-arterial interchanges in the vicinity of the project was conducted with the application of the HCM methodologies. The *Highway Capacity Manual* (HCM) (Transportation Research Board 2000) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, LOS is directly related to the average control delay per vehicle and is correlated to an LOS. A more detailed description of the HCM methodology is included in Section 4.8 of the traffic study. For state freeway ramps, LOS D is considered acceptable during the peak hours; LOS E and F are considered unacceptable during the peak hours.

For freeway main line and freeway-to-arterial facilities, LOS F is the level where the facility is operating over capacity and is considered deficient. As stated previously, an impact would occur when a proposed project is anticipated to contribute 1 to 49 or more peak hour trips to an SHF to already deficient (LOS F) freeway facilities.

2006 General Plan

Intersections at Freeway Ramps

An analysis of the intersections at State freeway ramps is provided in Section 4.8 of the Traffic Study. Level of service calculations were conducted for the study intersections to evaluate their operations under 2006 General Plan conditions. The intersection operations analysis results are summarized in Table 4-11. The following intersections are anticipated to experience unacceptable LOS (i.e., LOS "E" or worse) during the AM peak hours for 2006 General Plan traffic conditions:

- Von Karman Av./I-405 HOV Ramps
- Jamboree Rd./I-405 SB Ramps

Freeway Main Line and Ramps

The freeway system in the study area was evaluated as described in Section 5.11.1. Table 3-2 of the traffic study presents the peak hour volumes, lane densities, and the LOS for each freeway main line segment location. Freeway main line locations that experience deficient operations for 2006 General Plan conditions include:

- SB I-405, North of SR-55 FWY (PM Peak Hour Only)
- NB SR-73, North of Jamboree Rd (PM Peak Hour Only)
- NB SR-55, Dyer Rd. to MacArthur Blvd (AM and PM Peak Hours)
- NB SR-55, MacArthur Blvd. to I-405 FWY (AM Peak Hour Only)
- NB SR-55, I-405 FWY to SR-73 (AM Peak Hour Only)

- NB SR-55, SR-73 FWY to Mesa Dr. (AM Peak Hour Only)

A merge/diverge analysis was performed for the freeway-to-arterial interchange locations. Table 3-3 of the traffic study presents the peak hour volumes, lane densities, and the LOS for each freeway main line segment location. Freeway ramp locations that experience deficient operations for 2006 General Plan conditions include:

- I-405, SB Loop Off-Ramp at MacArthur Blvd.
- I-405, NB Off-Ramp at MacArthur Blvd.

General Plan LUE Amendment

Intersections at Freeway Ramps

An analysis of the intersections at state freeway ramps is provided in Section 4.8 of the Traffic Study. Level of service calculations were conducted for the study intersections to evaluate their operations under General Plan LUE Amendment conditions. The intersection operations analysis results are summarized in traffic study Table 4-11. The following intersections are anticipated to experience unacceptable LOS (i.e., LOS "E" or worse) during the AM peak hours:

- Von Karman Av./I-405 HOV Ramps
- Jamboree Rd./I-405 SB Ramps

For each of these intersections that are anticipated to experience a potential deficiency for General Plan scenarios, there is a reduction in delay with the General Plan LUE Amendment in comparison with the 2006 General Plan conditions. Therefore, the intersections are not significantly impacted by the General Plan LUE Amendment.

Freeway Main Line and Ramps

The freeway system in the study area was evaluated as described in Section 5.11.1. Table 4-7 of the traffic study presents the peak hour volumes, lane densities, and the LOS for each freeway main line segment location. Freeway main line locations that experience deficient operations for General Plan LUE Amendment conditions include:

- SB I-405, North of SR-55 FWY (PM Peak Hour Only)
- NB SR-73, North of Jamboree Rd (PM Peak Hour Only)
- NB SR-55, Dyer Rd. to MacArthur Blvd (AM and PM Peak Hours)
- NB SR-55, MacArthur Blvd. to I-405 FWY (AM Peak Hour Only)
- NB SR-55, I-405 FWY to SR-73 (AM Peak Hour Only)
- NB SR-55, SR-73 FWY to Mesa Dr. (AM Peak Hour Only)

A merge/diverge analysis was performed for the freeway ramp locations. Table 4-8 of the traffic study presents the peak hour volumes, lane densities, and the LOS for each freeway ramp locations. Freeway ramp locations that experience deficient operations for General Plan LUE Amendment conditions include:

- I-405, SB Loop Off-Ramp at MacArthur Blvd.
- I-405, NB Off-Ramp at MacArthur Blvd.

Potential Impacts

Because the proposed project would contribute to the existing and forecasted deficient freeway segments identified above, the project's contribution to this cumulative traffic impact is considered cumulatively considerable.

IMPACT 5.11-6: Project-related traffic would not result in significant impacts to congestion management plan facilities in the study area. The project, therefore, would not result in a designated road or intersection exceeding county congestion management agency service standards. [Threshold T-2]

Impact Analysis: The Orange County CMP was established in 1991 to reduce traffic congestion and to provide a mechanism for coordinating land use and development decisions. Compliance with CMP requirements ensures a city's eligibility to compete for state gas tax funds for local transportation projects. For OCTA CMP intersections, the acceptable LOS is E. If the intersection would operate at unacceptable LOS and the project impact is 0.03 or greater, mitigation is required to bring the intersection back to an acceptable level of service or to no-project conditions. CMP intersections in the vicinity of the project consist of:

- I-405 Northbound Ramps/Jamboree Road
- I-405 Southbound Ramps/Jamboree Road
- MacArthur Boulevard/Jamboree Road
- MacArthur Boulevard/Coast Highway
- Newport Boulevard/Coast Highway

The project impact at intersections was discussed in Impacts 5.11-1, 5.11-2, and 5.11-3. The project would not cause a CMP intersection to fall below LOS E and would not cause a cumulative increase of more than 0.03 in V/C ratio at any CMP intersection with an established LOS standard worse than LOS E for any scenario. The project's contribution to trips at CMP intersections would be less than significant.

IMPACT 5.11-7: The proposed project would not conflict with adopted policies, plans, and programs for alternative transportation. [Threshold T-6]

Impact Analysis: The proposed project would have no impact on policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The General Plan LUE Amendment would not result in changes to the circulation system and would not conflict with the design of pedestrian and bicycle facilities. Development of each site would have to comply with policies in the Land Use Element and Circulation

Element related to alternative transportation. Changes in land use intensities and land uses would have no effect on the placement of bus stops or any other aspect of the public transportation system. Impacts would be less than significant, and no mitigation is necessary.

5.11.4 Relevant General Plan Policies

Existing Policies

Circulation Element (CE)

Goal CE 1.1: An overall transportation system that facilitates the movement of people and goods within and through the City of Newport Beach and accommodates conservative growth within the City of Newport Beach, but is not expanded primarily to accommodate growth in the surrounding region.

- **CE 1.1.1 - Comprehensive Transportation System:** Provide a diverse transportation system that provides mobility options for the community.

- **CE 1.1.2 - Integrated System of Multiple Modes:** Provide an integrated transportation system that supports the land use plan set forth in the Land Use Element.

- **CE 1.1.3 - Levels of Service Related to Community Character:** Establish level of service standards that reflect the character of the various unique districts and neighborhoods of Newport Beach.

Goal CE 1.2: Reduced summertime visitor traffic impacts.

- **CE 1.2.4 - Public Transit:** Support and encourage OCTA efforts to provide/fund summertime expanded bus service and/or local shuttle services to reduce visitor traffic.

Goal CE 2.1: A roadway system that provides for the efficient movement of goods and people in the City of Newport Beach, while maintaining the community's character and its residents' quality of life.

- **CE 2.1.1 - Level of Service Standards:** Plan the arterial roadway system to accommodate projected traffic at the following level of service standards:

  a. Level of Service (LOS) "D" throughout the City, unless otherwise noted

  b. LOS "E" at any intersection in the Airport Area shared with Irvine

  c. LOS "E" at Coast Highway (EW) and Dover Drive (NS) due to right-of-way Limitations

  d. LOS "E" at Marguerite Avenue (NS) and Coast Highway (EW) in the pedestrian oriented area of Corona del Mar

  e. LOS "E" at Goldenrod Avenue (NS) and Coast Highway (EW) in the pedestrian oriented area of in Corona del Mar

- **CE 2.1.2 - Street and Highway Network:** Construct the circulation system described on the map entitled Newport Beach Circulation Element-Master Plan of Streets and Highways shown in Figure CE1 and Figure CE2 (cross-section).

- **CE 2.1.4 - Roadway Improvements:** Pursue construction of intersection improvements shown on Figure CE3 or alternate improvements that achieve an acceptable level of service.

- **CE 2.1.5 - MacArthur Boulevard Widening:** Plan the addition of lanes to MacArthur Boulevard between Harbor View Drive and the prolongation of Crown Drive so that more than four lanes are constructed only when the daily volume to capacity ratio equals 1.0 in that section of MacArthur Boulevard, not counting trips generated by the MacArthur Boulevard access drive to Corona del mar Plaza, and after public hearings before the Planning Commission and City Council, and only by narrowing the median.

- **CE 2.1.6 - Protection of Right-of-Way:** Protect right-of-way for designated future streets and highways through all practicable means.

Goal CE 2.3: Optimal roadway system operation.

- **CE 2.3.4 - Improvements to Reflect Changing Traffic Conditions**: Based on the monitoring of traffic conditions, consider additional improvements in areas with operations issues, such as intersections with heavy turn volumes (e.g. additional turn lanes, traffic signal progression, etc.).

Goal CE 3.1: A network of regional facilities which ensures the safe and efficient movement of people and goods from within the City to areas outside its boundaries, and minimizes the use of City streets by regional through traffic.

- **CE 3.1.1 - Freeway System:** Encourage ongoing regional investment in the freeway system.

- **CE 3.1.2 - Integration of Transportation Systems with Adjoining Communities and the Region:** Interface with regional and surrounding local agencies, such as Caltrans, OCTA, the County of Orange, John Wayne Airport, the Cities of Irvine, Costa Mesa, and Huntington Beach, and the University of California, Irvine to implement systems that serve the needs of regional travelers in a way that minimizes impacts on Newport Beach residents.

- **CE 3.1.3 - Regional Consistency:** The City of Newport Beach Master Plan of Streets and Highways (shown on Figure CE1) shall be consistent with the Orange County Master Plan of Arterial Highways.

- **CE 3.1.4 - Regional Traffic Mitigation:** Participate in programs (Congestion Management Program, Growth Management Program, etc.) to mitigate regional traffic congestion.

- **CE 3.1.5 - 19th Street Bridge:** Advocate for the implementation of needed regional Master Plan improvements, and be a strong advocate for construction of the 19th Street Bridge across the Santa Ana

River, or alternative improvements that achieve the same improvements in regional traffic flow, without disproportionate impacts on Newport Beach, consistent with all environmental review requirements.

Goal CE 4.1: A public transportation system that provides mobility for residents and encourages use of public transportation as an alternative to automobile travel.

- **CE 4.1.1 - Public Transit Efficiency:** Support efforts by OCTA and other agencies to increase the effectiveness and productivity of transit services, possibly including local shuttle services.

- **CE 4.1.2 - Transit Services for Special Need Populations:** Support efforts to increase accessible transit services and facilities for the elderly, disabled, and other transportation disadvantaged persons.

- **CE 4.1.3 - Seasonal Public Transit:** Coordinate with OCTA to provide seasonal, recreational, and special events shuttles.

- **CE 4.1.4 - Land Use Densities Supporting Public Transit:** Accommodate residential densities sufficient to support transit patronage, especially in mixed use areas such as the Airport Area.

- **CE 4.1.5 - John Wayne Airport Shuttles:** Encourage the use of airport shuttle services to minimize the impacts of air travelers on the local roadway system.

- **CE 4.1.6 - Transit Support Facilities:** Participate in efforts to develop transit support facilities, including park-and-ride lots, bus stops, and shelters.

Goal CE 5.1: Convenient trail systems that satisfy recreational desires and transportation needs.

- **CE 5.1.2 - Pedestrian Connectivity:** Link residential areas, schools, parks, and commercial centers so that residents can travel within the community without driving.

- **CE 5.1.3 - Pedestrian Improvements in New Development Projects:** Require new development projects to include safe and attractive sidewalks, walkways, and bike lanes in accordance with the Master Plan, and, if feasible, trails.

- **CE 5.1.4 - Linkages to Citywide Trail System and Neighborhoods:** Require developers to construct links to the planned trail system, adjacent areas, and communities where appropriate.

- **CE 5.1.5 - Bikeway System:** Cooperate with state, federal, county, and local agencies to coordinate bikeways and trails throughout the region.

- **CE 5.1.6 - Bicycle Supporting Facilities:** Incorporate bicycle and pedestrian facilities in the design plans for new streets and highways and, where feasible, in the plans for improving existing roads.

- **CE 5.1.7 - Bicycle Safety:** Provide for safety of bicyclists, equestrians, and pedestrians by adhering to current national standards and uniform practices.

- **CE 5.1.8 - Bicycle Conflicts with Vehicles and Pedestrians:** Minimize conflict points among motorized traffic, pedestrians, and bicycle traffic.

- **CE 5.1.9 - Integrated Bicycle Improvements:** Coordinate community bicycle and pedestrian facilities in a citywide network for continuity of travel.

- **CE 5.1.12 - Pedestrian Street Crossings:** Implement improved pedestrian crossings in key high volume areas such as Corona Del Mar, Mariners' Mile, West Newport, Airport Area, Newport Center/Fashion Island, and the Balboa Peninsula.

- **CE 5.1.13 - Overhead Pedestrian Street Crossings:** Consider overhead pedestrian crossings in areas where pedestrian use limits the efficiency of the roadway or signalized intersection.

- **CE 5.1.14 - Newport Harbor Trails and Walkways:** Develop and implement a long-range plan for public trails and walkways to access all appropriate commercial areas of the harbor, as determined to be physically and economically feasible including the following:

    a. Extension of the Lido Marina Village boardwalk across all of the waterfront commercial properties in Lido Village

    b. Provide a continuous waterfront walkway along the Rhine Channel, connecting Cannery Village and McFadden Square waterfront commercial areas with Las Arenas Beach at 19th Street

    c. Provide a walkway connecting the Lido Village area with Mariners' Mile

    d. Provide a continuous walkway along the Mariners' Mile waterfront from the Coast Highway/Newport Boulevard Bridge to the Balboa Bay Club (Policy HB 6.2)

- **CE 5.1.15 - Equestrian Trails:** Maintain the existing equestrian trail system in Santa Ana Heights (Figure CE5).

- **CE 5.1.16 - Bicycle and Pedestrian Safety:** Provide for the safety of bicyclists and pedestrians through provision of adequate facilities, including maintenance of extra sidewalk width where feasible.

Goal CE 6.1: An efficient circulation system through the use of transportation systems management.

- **CE 6.1.1 - Traffic Signals:** Improve traffic signal operations by optimizing signal timing, interconnecting signalized intersections along arterial streets, and installing computerized master traffic signal control systems in intensively utilized areas.

- **CE 6.1.2 - Intelligent Transportation Systems: E**xplore and implement intelligent transportation system and infrastructure improvements which will reduce peak hour traffic from that forecast in this Element.

- **CE 6.1.3 - Coordination with Adjacent Jurisdictions:** Coordinate operations with adjacent jurisdictions to enhance the efficiency of inter-jurisdictional roadway system operations.

Goal CE 6.2: Reduced automobile travel through the use of travel demand management strategies.

- **CE 6.2.1 - Alternative Transportation Modes:** Promote and encourage the use of alternative transportation modes, such as ridesharing, carpools, vanpools, public transit, bicycles, and walking; and provide facilities that support such alternate modes.

- **CE 6.2.2 Support Facilities for Alternative Modes:** Require new development projects to provide facilities commensurate with development type and intensity to support alternative modes, such as preferential parking for carpools, bicycle lockers, showers, commuter information areas, rideshare vehicle loading areas, water transportation docks, and bus stop improvements.

- **CE 6.2.3 - Project Site Design Supporting Alternative Modes:** Encourage increased use of public transportation by requiring project site designs that facilitate the use of public transportation and walking.

Goal CE 8.1: Adequate funding for needed transportation infrastructure and operations.

- **CE 8.1.1 - Transportation User and Benefit Fees:** Support legislation to increase transportation user and benefit fees, and to index such fees to keep pace with inflation, in order to provide the additional revenues for needed transportation facilities and services.

- **CE 8.1.2 - State Highway Revenues:** Support legislation to increase state highway revenues as needed to maintain and rehabilitate the existing state highway system and to match all available federal highway funding.

- **CE 8.1.3 - Innovative Transportation Funding:** Support the evaluation and implementation of innovative transportation financing mechanisms such as local tax increment districts, benefit assessment districts, and joint development and use of transportation centers.

- **CE 8.1.4 - Local Street and Highway Revenues:** Support measures to increase local street and highway revenues as needed to fund all road reconstruction, operation, and maintenance cost.

- **CE 8.1.5 - Comprehensive Funding Program:** Support measures to develop and implement a continuing funding program, including private sector participation and an equitable fare structure, to fund the construction, operation, and maintenance of transit facilities and services.

- **CE 8.1.6 - Annual Budgeting for Improvements:** Annually review and consider budgeting for projects contributing to completion of the Master Plan of Streets and Highways.

- **CE 8.1.7 - Fair Share Fee Ordinance:** Periodically reviews the Fair Share Fee Ordinance, reassess the unfunded cost of required improvements, and adjusts the required Fair Share Fees as appropriate.

- **CE 8.1.8 - Roadway Improvements Funding:** Fund costs of major roadway facility and intersection improvements through gas tax revenues, federal, state, and county grants, and City ordinances to avoid burdening the General Fund to the extent that this is possible.

- **CE 8.1.9 - Right-of-Way Dedication:** Require the dedication of needed right-of-way in conjunction with approval of subdivision maps or other discretionary approvals.

- **CE 8.1.10 - Development Requirements:** Require development to provide the needed roadway improvements adjacent to a site, commensurate with project impact and in accordance with the Master Plan of Streets and Highways.

- **CE 8.1.11 - Joint Funding with Adjoining Jurisdictions:** Pursue joint funding of improvements in areas (such as the Airport Area) where traffic growth and/or needed improvements are demonstrably based upon traffic contributions or improvements that are a joint responsibility of Newport Beach and one or more adjacent jurisdictions/agencies.

- **CE 8.1.12 - Measure M Restrictions:** Measure M sales tax revenues shall not be used to replace private developer funding that has been committed for any project or normal subdivision obligations.

- **CE 8.1.13 - Transportation Improvement or Special Assessment District:** Establish a transportation improvement or special assessment district to fund improvements needed in the Airport Area.

Land Use Element (LU)

Goal LU 6.4: If acquisition for open space is not successful, a high-quality residential community with supporting uses that provides revenue to restore and protect wetlands and important habitats.

- **LU 6.4.9 - Circulation:** Facilitate development of an arterial highway linking Coast Highway with Newport Boulevard to relieve congestion at Superior Avenue, if the property is developed.

New and/or Revised Policies

The proposed General Plan Land Use Element Amendment includes the following new and/or revised policies that are relevant to land use and noise. The proposed changes are shown in underlined/~~strikeout~~ for new and eliminated text, respectively. The goal for a revised policy is provided, even if the goal itself is unchanged.

Goal LU 2: A living, active, and diverse environment that complements all lifestyles and enhances neighborhoods, without compromising the valued resources that make Newport Beach unique. It contains a diversity of uses that support the needs of residents, sustain and enhance the economy, provide job opportunities, serve visitors that enjoy the City's diverse recreational amenities, promote public health, and protect its important environmental setting, resources, and quality of life.

- **LU 2.8 Adequate Infrastructure -** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, storm drainage, energy, technology cabling, and so on) and public services (schools, parks, libraries, seniors, youth, police, fire, and so on).

Goal LU 3: A development pattern that retains and complements the City's residential neighborhoods, commercial and industrial districts, open spaces, and natural environment.

- **LU 3.X1 Community Connectivity -** Promote improved connectivity between Newport Beach's key districts through well-landscaped and safe pedestrian corridors, bicycle trails, wayfinding signage, and similar elements.

Goal LU X: Land use development practices that contribute to a sustained natural environment for use by future generations, economy, and well-being of Newport Beach's residents, while reducing greenhouse gas emissions and impacts on climate change.

- **LU X.X3 Sustainable Sites and Land Development -** Promote land development practices that reduce energy and water consumption, pollution, greenhouse gas emissions, and waste generation incorporating such techniques as:
    - Concentrating and designing development to promote walking, bicycling, and use of public transit as an alternative to automobile travel;
    - Capturing and re-using stormwater runoff on-site for irrigation and groundwater percolation;
    - Managing wastewater and using recycled water, including encouraging the use of grey water;
    - Orienting buildings to maximize opportunities for solar energy use, daylighting, and ventilation;
    - Using landscapes that conserve water and reduce green waste;
    - Shading of surface parking, walkways, and plazas; and/or
    - Recycling and/or salvaging for reuse of construction and demolition debris

Goal LU 6.14: A successful mixed-use district that integrates economic and commercial centers serving the needs of Newport Beach residents and the sub-region, with expanded opportunities for residents to live close to jobs, commerce, entertainment, and recreation, and is supported by a pedestrian-friendly environment.

- **LU 6.14.1 Fashion Island ["CR" designation] -** Provide the opportunity for ~~an~~ additional ~~anchor tenant, other~~ retail, ~~and/or~~ entertainment and/or supporting uses that complement, are integrated with, and enhance the economic vitality of existing development. ~~A maximum of 213,257 square feet of retail development capacity specified in Table LU2 may be reallocated for other permitted use sin Newport Center, provided that the peak hour vehicular trips generated do not exceed those attributable to the underlying retail entitlement. The Planning Director shall revise this number upon approval of the transfer or conversion of the retail development capacity with approval by the City Council.~~

Goal LU 6.15: A mixed-use community that provides jobs, residential, and supporting services in close proximity, with pedestrian-oriented amenities that facilitate walking and enhance livability.

- **LU 6.15.5 Residential and Supporting Uses -** Accommodate the development of a maximum of 2,200 multi-family residential units, including work force housing, and mixed-use buildings that integrate residential with ground level office or retail uses, along with supporting retail, grocery stores, and parklands. The residential units may consist of Units that may be constructed replacement of permitted non-residential uses provided that ~~Residential units may be developed only as the replacement of underlying permitted nonresidential uses. When a development phase includes a mix of residential and nonresidential uses or replaces existing industrial uses,~~ the number of peak hour trips generated by cumulative development of the site shall not exceed the number of trips that would result from development of the underlying permitted allocated nonresidential uses and (b) ~~. However~~, a maximum of 550 units may be developed as infill on surface parking lots or areas not used ~~as~~ for occupiable buildings on properties within the area depicted on the "Airport Area Residential Villages Illustrative Concept Diagram" ~~Conceptual Development Plan Area depicted on~~ Figure LU22 provided that the parking is replaced on site.

5.11.5 Existing Regulations and Standard Conditions

The following chapters of the City's Municipal Code specifically include traffic, parking, and circulation provisions:

- Chapter 20.66, *Off Street Parking and Loading*
- Chapter 15.40, *Traffic Phasing Ordinance*
- Chapter 15.38, *Fair Share Traffic Contribution Ordinance*
- Chapter 12.62, *Temporary Street Closure*
- Chapter 13.01, *Street Construction Permits*

5.11.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.11-1, 5.11-2, 5.11-4 and 5.11-6, 5.11-7.

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.11-3 Vehicular traffic from the proposed project in conjunction with the amendment of the Airport Settlement Agreement could result in significant impacts at study-area intersections.

- Impact 5.11-5 Vehicular traffic from the proposed project in conjunction with cumulative traffic would result in significant impacts to the following freeway main line segments:

  - SB I-405, North of SR-55 Freeway
  - NB SR-73, North of Jamboree Road
  - NB SR-55, Dyer Road to MacArthur Boulevard
  - NB SR-55, MacArthur Boulevard to I-405 Freeway
  - NB SR-55, I-405 Freeway to SR-73
  - NB SR-55, SR-73 Freeway to Mesa Drive

  And the following freeway ramps:

  - I-405, NB Off-Ramp at MacArthur Boulevard
  - I-405, SB Loop Off-Ramp at MacArthur Boulevard

5.11.7 Mitigation Measures

Impact 5.11-3

Until the EIR analysis for the amendment of the Airport Settlement Agreement is completed, it is not possible to identify with precision all potential environmental effects of the proposed project related to traffic. At the time of the writing of this SEIR, no feasible mitigation measures can be identified to reduce significant impacts at affected intersections.

Impact 5.11-5

Caltrans has not adopted a fee program that can ensure that locally contributed impact fees will be tied to improvements to freeway main lines and ramps, and only Caltrans has the jurisdiction over main line and ramp improvements. No feasible mitigation measures that can be implemented by the City of Newport Beach have been identified.

5.11.8 Level of Significance After Mitigation

Impact 5.11-3

Because it cannot be determined at this point if significant impacts would occur and if mitigation measures would be feasible, impacts at study area intersections would be significant and unavoidable.

Impacts 5.11-5

Because Caltrans has exclusive control over state highway improvements, ensuring that fair share contributions to main line improvements are actually part of a program tied to implementation of mitigation is within the jurisdiction of Caltrans. Therefore, a significant impact at the freeway main line and ramp locations would occur.

5.11.9 References

Orange County. Airport Settlement Agreement Amendment NOP. http://www.ocair.com/NOP/.

Orange County Transportation Authority. 2013, November. 2013 Orange County Congestion Management Program. http://www.octa.net/pdf/Final%202013%20CMP.pdf.

Urban Crossroads. 2014, March 12. City of Newport Beach General Plan Land Use Element Amendment Traffic Impact Analysis.