

**CRITICAL MOVEMENT ANALYSIS WORKSHEETS**

**TRAFFIC ANALYSIS FOR  
PALAZZO WESTWOOD  
MIXED-USE DEVELOPMENT  
(SUPERMARKET ALTERNATIVE)**

**Prepared for:**

**CASDEN PROPERTIES**

**Prepared by:**

**Crain & Associates  
2007 Sawtelle Boulevard, Suite 4  
Los Angeles, California 90025  
(310) 473-6508**

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CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 1, SUNSET BOULEVARD AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	300	1026	0	0
EASTBOUND	0	1855	355	0
NORTHBOUND	54	0	51	150
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	0	0	0	3
EASTBOUND	0	0	1	1	0	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	300	N/A	513	N/A	N/A	N/A
EASTBOUND	N/A	N/A	1105	1105	N/A	N/A
NORTHBOUND	54	N/A	N/A	N/A	51	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	1405
NORTH-SOUTH CRITICAL VOLUMES .....	54
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THE SUM OF CRITICAL VOLUMES .....	1459
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.954
LEVEL OF SERVICE .....	E

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 2, SUNSET BOULEVARD AND HILGARD AVENUE/COPA DE ORO ROAD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	499	1047	26	0
EASTBOUND	26	1172	299	0
NORTHBOUND	158	28	0	97
SOUTHBOUND	50	100	16	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	0	0	1	1	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	499	N/A	536	536	N/A	N/A
EASTBOUND	26	N/A	736	736	N/A	N/A
NORTHBOUND	93	93	N/A	N/A	0	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	166

EAST-WEST CRITICAL VOLUMES .....	1234
NORTH-SOUTH CRITICAL VOLUMES .....	259
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THE SUM OF CRITICAL VOLUMES .....	1493
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	4*
CMA VALUE .....	1.016
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 3, SUNSET BOULEVARD AND BEVERLY GLEN BLVD./BEL AIR ROAD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	632	1589	56	0
EASTBOUND	18	1083	89	0
NORTHBOUND	49	44	0	316
SOUTHBOUND	103	77	24	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	632	N/A	822	822	N/A	N/A
EASTBOUND	18	N/A	586	586	N/A	N/A
NORTHBOUND	49	N/A	44	N/A	0	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	204

EAST-WEST CRITICAL VOLUMES ..... 1218  
NORTH-SOUTH CRITICAL VOLUMES ..... 253  
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THE SUM OF CRITICAL VOLUMES ..... 1471  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*  
  
CMA VALUE ..... 1.000  
  
LEVEL OF SERVICE ..... E

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\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 4, MONTANA BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	70	111	92	0
EASTBOUND	11	349	80	0
NORTHBOUND	97	317	480	35
SOUTHBOUND	437	925	86	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	96	N/A	176	N/A	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	440
NORTHBOUND	97	N/A	158	N/A	480	N/A
SOUTHBOUND	437	N/A	506	506	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	510
NORTH-SOUTH CRITICAL VOLUMES .....	917
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THE SUM OF CRITICAL VOLUMES .....	1427
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.931
LEVEL OF SERVICE .....	E

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 5, MONTANA BOULEVARD/GAYLEY AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	12	98	38	0
EASTBOUND	112	730	40	0
NORTHBOUND	86	306	32	0
SOUTHBOUND	127	402	35	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	148
EASTBOUND	N/A	N/A	N/A	N/A	N/A	882
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	424
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	564

EAST-WEST CRITICAL VOLUMES ..... 894  
NORTH-SOUTH CRITICAL VOLUMES ..... 650

THE SUM OF CRITICAL VOLUMES ..... 1544

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2

CMA VALUE ..... 0.959

LEVEL OF SERVICE ..... E

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 6, WYTON DRIVE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	22	114	48	0
EASTBOUND	17	32	10	102
NORTHBOUND	204	234	16	0
SOUTHBOUND	48	603	455	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	0	1	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	184
EASTBOUND	N/A	49	N/A	N/A	10	N/A
NORTHBOUND	204	N/A	125	125	N/A	N/A
SOUTHBOUND	48	N/A	529	529	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	201
NORTH-SOUTH CRITICAL VOLUMES .....	733
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THE SUM OF CRITICAL VOLUMES .....	934
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.553
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 7, LEVERING AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	0	0	1	0
EASTBOUND	46	0	300	0
NORTHBOUND	55	406	5	0
SOUTHBOUND	0	402	39	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	1
EASTBOUND	N/A	N/A	N/A	N/A	N/A	346
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	466
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	441

EAST-WEST CRITICAL VOLUMES .....	346
NORTH-SOUTH CRITICAL VOLUMES .....	496
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THE SUM OF CRITICAL VOLUMES .....	842
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.491
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 8, LE CONTE AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	209	56	212	54
EASTBOUND	55	65	15	0
NORTHBOUND	11	894	176	0
SOUTHBOUND	107	290	7	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	209	N/A	56	N/A	212	N/A
EASTBOUND	55	N/A	N/A	80	N/A	N/A
NORTHBOUND	11	N/A	535	535	N/A	N/A
SOUTHBOUND	107	N/A	148	148	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	289
NORTH-SOUTH CRITICAL VOLUMES .....	642
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THE SUM OF CRITICAL VOLUMES .....	931
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.551
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 9, LE CONTE AVENUE AND WESTWOOD PLAZA/WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	136	335	86	28
EASTBOUND	125	289	45	0
NORTHBOUND	123	823	180	68
SOUTHBOUND	57	232	31	68

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	136	N/A	335	N/A	86	N/A
EASTBOUND	125	N/A	N/A	334	N/A	N/A
NORTHBOUND	123	N/A	412	N/A	180	N/A
SOUTHBOUND	57	N/A	116	N/A	31	N/A

EAST-WEST CRITICAL VOLUMES .....	470
NORTH-SOUTH CRITICAL VOLUMES .....	469
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THE SUM OF CRITICAL VOLUMES .....	939
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.556
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 10, LE CONTE AVENUE AND TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	19	438	68	0
EASTBOUND	150	301	40	0
NORTHBOUND	17	103	23	0
SOUTHBOUND	47	38	190	75

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	19	N/A	253	253	N/A	N/A
EASTBOUND	150	N/A	170	170	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	143
SOUTHBOUND	N/A	85	N/A	N/A	190	N/A

EAST-WEST CRITICAL VOLUMES .....	403
NORTH-SOUTH CRITICAL VOLUMES .....	207
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THE SUM OF CRITICAL VOLUMES .....	610
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.346
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 11, LE CONTE AVENUE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	26	132	8	0
EASTBOUND	282	42	0	38
NORTHBOUND	41	509	30	0
SOUTHBOUND	12	296	208	162

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	1	0	0	1	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	26	N/A	N/A	140	N/A	N/A
EASTBOUND	162	162	N/A	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	580
SOUTHBOUND	N/A	144	164	N/A	208	N/A

EAST-WEST CRITICAL VOLUMES .....	302
NORTH-SOUTH CRITICAL VOLUMES .....	592
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THE SUM OF CRITICAL VOLUMES .....	894
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3*
CMA VALUE .....	0.557
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

Eastbound and Westbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 12, WEYBURN AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	274	0	66	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	281	404	170
SOUTHBOUND	137	639	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	0	0	1	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	170	N/A	N/A	N/A	N/A	170
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	140	N/A	404	N/A
SOUTHBOUND	137	N/A	320	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	170
NORTH-SOUTH CRITICAL VOLUMES .....	541
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THE SUM OF CRITICAL VOLUMES .....	711
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.404
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 13, WEYBURN AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	34	92	33	0
EASTBOUND	389	212	61	0
NORTHBOUND	80	737	146	0
SOUTHBOUND	28	355	207	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	73	N/A	86	N/A	N/A
EASTBOUND	389	N/A	N/A	273	N/A	N/A
NORTHBOUND	80	N/A	442	442	N/A	N/A
SOUTHBOUND	28	N/A	281	281	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	475
NORTH-SOUTH CRITICAL VOLUMES .....	470
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THE SUM OF CRITICAL VOLUMES .....	945
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.560
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 14, WEYBURN AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	27	74	37	0
EASTBOUND	64	100	41	0
NORTHBOUND	65	1025	32	0
SOUTHBOUND	15	335	4	32

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	138
EASTBOUND	N/A	102	N/A	102	N/A	N/A
NORTHBOUND	65	N/A	528	528	N/A	N/A
SOUTHBOUND	N/A	143	207	N/A	4	N/A

EAST-WEST CRITICAL VOLUMES .....	202
NORTH-SOUTH CRITICAL VOLUMES .....	543
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THE SUM OF CRITICAL VOLUMES .....	745
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.427
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 15, WEYBURN AVENUE AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	49	102	0	0
EASTBOUND	0	120	60	0
NORTHBOUND	68	0	11	24
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	151
EASTBOUND	N/A	N/A	N/A	N/A	N/A	180
NORTHBOUND	68	N/A	N/A	N/A	11	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	229
NORTH-SOUTH CRITICAL VOLUMES .....	68
	-----
THE SUM OF CRITICAL VOLUMES .....	297
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.168
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 16, WEYBURN AVENUE AND TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	85	10	0
EASTBOUND	43	71	0	0
NORTHBOUND	16	111	21	0
SOUTHBOUND	26	0	62	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	95
EASTBOUND	N/A	N/A	N/A	N/A	N/A	114
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	148
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	88

EAST-WEST CRITICAL VOLUMES .....	138
NORTH-SOUTH CRITICAL VOLUMES .....	174
	-----
THE SUM OF CRITICAL VOLUMES .....	312
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.312
LEVEL OF SERVICE .....	A

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Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 17, WEYBURN AVENUE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	4	32	32	0
EASTBOUND	37	9	34	0
NORTHBOUND	22	472	10	0
SOUTHBOUND	12	297	56	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	68
EASTBOUND	N/A	N/A	N/A	N/A	N/A	80
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	504
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	365

EAST-WEST CRITICAL VOLUMES .....	105
NORTH-SOUTH CRITICAL VOLUMES .....	516
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THE SUM OF CRITICAL VOLUMES .....	621
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.352
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 18, KINROSS AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	25	0	0	31
EASTBOUND	0	0	0	0
NORTHBOUND	0	897	244	7
SOUTHBOUND	95	712	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	0	0	1	0	3
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	14	N/A	N/A	N/A	0	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	448	N/A	244	N/A
SOUTHBOUND	95	N/A	356	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	14
NORTH-SOUTH CRITICAL VOLUMES .....	543
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THE SUM OF CRITICAL VOLUMES .....	557
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.316
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 19, KINROSS AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	42	71	55	0
EASTBOUND	20	26	39	0
NORTHBOUND	142	812	56	0
SOUTHBOUND	35	443	43	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	42	N/A	N/A	126	N/A	N/A
EASTBOUND	20	N/A	N/A	65	N/A	N/A
NORTHBOUND	142	N/A	434	434	N/A	N/A
SOUTHBOUND	35	N/A	243	243	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 146  
NORTH-SOUTH CRITICAL VOLUMES ..... 469  
-----  
THE SUM OF CRITICAL VOLUMES ..... 615  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 0.348  
  
LEVEL OF SERVICE ..... A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 20, KINROSS AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	4	51	53	0
EASTBOUND	28	36	56	0
NORTHBOUND	44	1057	41	0
SOUTHBOUND	10	354	10	14

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	0	1	0	1	0	0	2
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	4	N/A	N/A	104	N/A	N/A
EASTBOUND	28	N/A	N/A	92	N/A	N/A
NORTHBOUND	N/A	553	N/A	589	N/A	N/A
SOUTHBOUND	N/A	160	204	N/A	10	N/A

EAST-WEST CRITICAL VOLUMES .....	132
NORTH-SOUTH CRITICAL VOLUMES .....	599
	-----
THE SUM OF CRITICAL VOLUMES .....	731
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.417
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 21, KINROSS AVENUE AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	0	0	0
EASTBOUND	36	0	0	38
NORTHBOUND	103	0	101	18
SOUTHBOUND	60	0	8	18

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	0	0
EASTBOUND	1	0	0	0	1	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	1	0	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
EASTBOUND	36	N/A	N/A	N/A	0	N/A
NORTHBOUND	103	N/A	N/A	N/A	101	N/A
SOUTHBOUND	60	N/A	N/A	N/A	8	N/A

EAST-WEST CRITICAL VOLUMES .....	36
NORTH-SOUTH CRITICAL VOLUMES .....	160
	-----
THE SUM OF CRITICAL VOLUMES .....	196
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.196
LEVEL OF SERVICE .....	A

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Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 22, LINDBROOK DRIVE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	103	0	93	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	867	161	0
SOUTHBOUND	91	442	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	103	N/A	N/A	93	N/A	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	0	N/A	514	514	N/A	N/A
SOUTHBOUND	91	N/A	221	221	N/A	N/A

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EAST-WEST CRITICAL VOLUMES ..... 103
NORTH-SOUTH CRITICAL VOLUMES ..... 605
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THE SUM OF CRITICAL VOLUMES ..... 708

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2

CMA VALUE ..... 0.402

LEVEL OF SERVICE ..... A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 23, LINDBROOK DRIVE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	105	152	37	0
EASTBOUND	30	165	75	0
NORTHBOUND	33	1061	168	52
SOUTHBOUND	23	365	19	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	0	1	1	0	1	0	3
SOUTHBOUND	0	1	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	136	N/A	158	N/A	N/A
EASTBOUND	N/A	135	N/A	135	N/A	N/A
NORTHBOUND	N/A	532	562	N/A	168	N/A
SOUTHBOUND	N/A	59	174	174	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	240
NORTH-SOUTH CRITICAL VOLUMES .....	585
	-----
THE SUM OF CRITICAL VOLUMES .....	825
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.480
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 24, LINDBROOK DRIVE AND GLENDON AVENUE/TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	55	275	160	0
EASTBOUND	68	327	14	0
NORTHBOUND	91	530	334	44
SOUTHBOUND	51	108	6	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	0	1	0	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	226	N/A	264	N/A	N/A
EASTBOUND	N/A	165	N/A	244	N/A	N/A
NORTHBOUND	91	N/A	530	N/A	334	N/A
SOUTHBOUND	51	N/A	N/A	114	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	332
NORTH-SOUTH CRITICAL VOLUMES .....	581
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THE SUM OF CRITICAL VOLUMES .....	913
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.539
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 25, LINDBROOK DRIVE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	81	40	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	439	0	60
SOUTHBOUND	16	278	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	1	0	1	0	2
SOUTHBOUND	0	1	0	0	0	0	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	121
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	439	N/A	0	N/A
SOUTHBOUND	N/A	294	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	121
NORTH-SOUTH CRITICAL VOLUMES .....	454
	-----
THE SUM OF CRITICAL VOLUMES .....	575
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.383
LEVEL OF SERVICE .....	A

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Capacity assumed = 1500.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 26, WILSHIRE BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	124	3334	64	0
EASTBOUND	60	3387	187	0
NORTHBOUND	215	271	235	0
SOUTHBOUND	244	638	222	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	1	0	3	1	0	0	5
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	68	N/A	850	850	N/A	N/A
EASTBOUND	60	N/A	894	894	N/A	N/A
NORTHBOUND	215	N/A	253	253	N/A	N/A
SOUTHBOUND	244	N/A	430	430	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	962
NORTH-SOUTH CRITICAL VOLUMES .....	645
	-----
THE SUM OF CRITICAL VOLUMES .....	1607
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	5
CMA VALUE .....	1.099
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 27, WILSHIRE BOULEVARD AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	94	2354	38	0
EASTBOUND	319	3865	196	0
NORTHBOUND	101	520	209	26
SOUTHBOUND	254	239	214	175

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	52	N/A	598	598	N/A	N/A
EASTBOUND	175	N/A	1015	1015	N/A	N/A
NORTHBOUND	101	N/A	260	N/A	209	N/A
SOUTHBOUND	254	N/A	151	151	151	N/A

EAST-WEST CRITICAL VOLUMES .....	1067
NORTH-SOUTH CRITICAL VOLUMES .....	514
	-----
THE SUM OF CRITICAL VOLUMES .....	1581
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	1.039
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 28, WILSHIRE BOULEVARD AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	126	2109	53	0
EASTBOUND	593	2833	129	0
NORTHBOUND	66	346	0	21
SOUTHBOUND	82	90	0	307

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	126	N/A	540	540	N/A	N/A
EASTBOUND	326	N/A	740	740	N/A	N/A
NORTHBOUND	66	N/A	173	N/A	0	N/A
SOUTHBOUND	82	N/A	90	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	866
NORTH-SOUTH CRITICAL VOLUMES .....	255
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THE SUM OF CRITICAL VOLUMES .....	1121
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.717
LEVEL OF SERVICE .....	C

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 29, WILSHIRE BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	160	2070	119	0
EASTBOUND	493	2232	125	0
NORTHBOUND	104	737	133	0
SOUTHBOUND	58	276	0	201

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	1	0	0	4
SOUTHBOUND	1	0	3	0	1	0	5

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	88	N/A	547	547	N/A	N/A
EASTBOUND	271	N/A	589	589	N/A	N/A
NORTHBOUND	104	N/A	290	290	N/A	N/A
SOUTHBOUND	58	N/A	92	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	818
NORTH-SOUTH CRITICAL VOLUMES .....	348
	-----
THE SUM OF CRITICAL VOLUMES .....	1166
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	4
CMA VALUE .....	0.778
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 30, WILSHIRE BOULEVARD AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	75	2097	211	0
EASTBOUND	321	1793	215	0
NORTHBOUND	19	120	15	0
SOUTHBOUND	59	46	8	88

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	75	N/A	577	577	N/A	N/A
EASTBOUND	177	N/A	502	502	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	154
SOUTHBOUND	59	N/A	46	N/A	4	N/A

EAST-WEST CRITICAL VOLUMES .....	754
NORTH-SOUTH CRITICAL VOLUMES .....	213
	-----
THE SUM OF CRITICAL VOLUMES .....	967
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.609
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 31, WILSHIRE BOULEVARD AND SELBY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	64	2842	73	0
EASTBOUND	23	1812	0	35
NORTHBOUND	83	75	91	0
SOUTHBOUND	109	36	33	12

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	64	N/A	972	972	N/A	N/A
EASTBOUND	23	N/A	604	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	249
SOUTHBOUND	N/A	145	N/A	N/A	33	N/A

EAST-WEST CRITICAL VOLUMES .....	995
NORTH-SOUTH CRITICAL VOLUMES .....	358
	-----
THE SUM OF CRITICAL VOLUMES .....	1353
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.832
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 32, WILSHIRE BOULEVARD AND WESTHOLME AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	36	2440	117	0
EASTBOUND	45	2114	0	70
NORTHBOUND	53	177	65	0
SOUTHBOUND	53	56	33	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	36	N/A	852	852	N/A	N/A
EASTBOUND	45	N/A	705	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	295
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	142

EAST-WEST CRITICAL VOLUMES .....	897
NORTH-SOUTH CRITICAL VOLUMES .....	348
	-----
THE SUM OF CRITICAL VOLUMES .....	1245
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.804
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 33, WILSHIRE BOULEVARD AND WARNER AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	** RIGHT TURNS **			
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	15	2494	78	0
EASTBOUND	88	2161	21	0
NORTHBOUND	89	63	0	33
SOUTHBOUND	83	78	66	44

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	2	1	0	0	4
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	15	N/A	857	857	N/A	N/A
EASTBOUND	88	N/A	727	727	N/A	N/A
NORTHBOUND	89	N/A	63	N/A	0	N/A
SOUTHBOUND	83	N/A	78	N/A	66	N/A

EAST-WEST CRITICAL VOLUMES .....	945
NORTH-SOUTH CRITICAL VOLUMES .....	167
	-----
THE SUM OF CRITICAL VOLUMES .....	1112
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.710
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 34, WELLWORTH AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	70	66	83	0
EASTBOUND	30	70	52	0
NORTHBOUND	60	1123	228	0
SOUTHBOUND	23	376	10	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	219
EASTBOUND	N/A	N/A	N/A	N/A	N/A	152
NORTHBOUND	60	N/A	676	676	N/A	N/A
SOUTHBOUND	23	N/A	193	193	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	249
NORTH-SOUTH CRITICAL VOLUMES .....	699
	-----
THE SUM OF CRITICAL VOLUMES .....	948
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.562
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 35, OHIO AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	72	336	40	0
EASTBOUND	201	320	0	79
NORTHBOUND	81	1176	29	0
SOUTHBOUND	24	461	72	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	1	0	1	0	3
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	72	N/A	N/A	376	N/A	N/A
EASTBOUND	201	N/A	320	N/A	0	N/A
NORTHBOUND	81	N/A	602	602	N/A	N/A
SOUTHBOUND	24	N/A	266	266	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	577
NORTH-SOUTH CRITICAL VOLUMES .....	626
	-----
THE SUM OF CRITICAL VOLUMES .....	1203
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.732
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 36, SANTA MONICA BOULEVARD (N I/S) AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	131	1406	147	0
EASTBOUND	173	1349	58	0
NORTHBOUND	59	889	40	0
SOUTHBOUND	89	526	0	68

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	2	1	0	0	4
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	131	N/A	518	518	N/A	N/A
EASTBOUND	173	N/A	469	469	N/A	N/A
NORTHBOUND	59	N/A	464	464	N/A	N/A
SOUTHBOUND	89	N/A	263	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	691
NORTH-SOUTH CRITICAL VOLUMES .....	553
	-----
THE SUM OF CRITICAL VOLUMES .....	1244
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.803
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 1, SUNSET BOULEVARD AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	233	1500	0	0
EASTBOUND	0	1333	150	0
NORTHBOUND	285	0	243	116
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	0	0	0	3
EASTBOUND	0	0	1	1	0	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	233	N/A	750	N/A	N/A	N/A
EASTBOUND	N/A	N/A	742	742	N/A	N/A
NORTHBOUND	285	N/A	N/A	N/A	243	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	975
NORTH-SOUTH CRITICAL VOLUMES .....	285
	-----
THE SUM OF CRITICAL VOLUMES .....	1260
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.814
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 2, SUNSET BOULEVARD AND HILGARD AVENUE/COPA DE ORO ROAD  
DATE: 10/8/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	289	1186	21	0
EASTBOUND	19	1028	340	0
NORTHBOUND	256	68	236	144
SOUTHBOUND	17	59	10	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	0	0	1	1	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	289	N/A	604	604	N/A	N/A
EASTBOUND	19	N/A	684	684	N/A	N/A
NORTHBOUND	187	N/A	N/A	N/A	187	187
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	86

EAST-WEST CRITICAL VOLUMES ..... 972  
NORTH-SOUTH CRITICAL VOLUMES ..... 273

THE SUM OF CRITICAL VOLUMES ..... 1245

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*

CMA VALUE ..... 0.835

LEVEL OF SERVICE ..... D

\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 3, SUNSET BOULEVARD AND BEVERLY GLEN BLVD./BEL AIR ROAD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	364	1247	50	0
EASTBOUND	19	1519	56	0
NORTHBOUND	208	114	393	182
SOUTHBOUND	58	53	18	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	364	N/A	648	648	N/A	N/A
EASTBOUND	19	N/A	788	788	N/A	N/A
NORTHBOUND	208	N/A	114	N/A	393	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	129

EAST-WEST CRITICAL VOLUMES ..... 1152  
NORTH-SOUTH CRITICAL VOLUMES ..... 522

THE SUM OF CRITICAL VOLUMES ..... 1674

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*

CMA VALUE ..... 1.147

LEVEL OF SERVICE ..... F

\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 4, MONTANA BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	60	295	372	24
EASTBOUND	7	104	39	0
NORTHBOUND	232	1486	15	114
SOUTHBOUND	49	322	30	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	355	N/A	N/A	372	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	150
NORTHBOUND	232	N/A	743	N/A	15	N/A
SOUTHBOUND	49	N/A	176	176	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	379
NORTH-SOUTH CRITICAL VOLUMES .....	792
	-----
THE SUM OF CRITICAL VOLUMES .....	1171
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.752
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 5, MONTANA BOULEVARD/GAYLEY AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	30	584	248	0
EASTBOUND	50	225	32	0
NORTHBOUND	84	348	58	0
SOUTHBOUND	89	393	81	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	862
EASTBOUND	N/A	N/A	N/A	N/A	N/A	307
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	490
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	563

EAST-WEST CRITICAL VOLUMES .....	912
NORTH-SOUTH CRITICAL VOLUMES .....	647
	-----
THE SUM OF CRITICAL VOLUMES .....	1559
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.969
LEVEL OF SERVICE .....	E

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 6, WYTON DRIVE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	26	42	15	0
EASTBOUND	69	112	173	98
NORTHBOUND	177	713	64	0
SOUTHBOUND	27	393	44	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	0	1	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	83
EASTBOUND	N/A	181	N/A	N/A	173	N/A
NORTHBOUND	177	N/A	388	388	N/A	N/A
SOUTHBOUND	27	N/A	218	218	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	207
NORTH-SOUTH CRITICAL VOLUMES .....	415
	-----
THE SUM OF CRITICAL VOLUMES .....	622
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.352
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 7, LEVERING AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	84	117	53	0
EASTBOUND	1	27	55	0
NORTHBOUND	148	500	54	0
SOUTHBOUND	35	388	7	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	254
EASTBOUND	N/A	N/A	N/A	N/A	N/A	83
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	702
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	430

EAST-WEST CRITICAL VOLUMES .....	255
NORTH-SOUTH CRITICAL VOLUMES .....	737
	-----
THE SUM OF CRITICAL VOLUMES .....	992
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.591
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 8, LE CONTE AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	335	235	27	166
EASTBOUND	23	114	3	0
NORTHBOUND	50	500	198	0
SOUTHBOUND	233	1234	28	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	335	N/A	235	N/A	27	N/A
EASTBOUND	23	N/A	N/A	117	N/A	N/A
NORTHBOUND	50	N/A	349	349	N/A	N/A
SOUTHBOUND	233	N/A	631	631	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	452
NORTH-SOUTH CRITICAL VOLUMES .....	681
	-----
THE SUM OF CRITICAL VOLUMES .....	1133
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.685
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 9, LE CONTE AVENUE AND WESTWOOD PLAZA/WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	178	435	0	76
EASTBOUND	74	333	96	0
NORTHBOUND	178	474	168	89
SOUTHBOUND	121	795	178	86

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	178	N/A	435	N/A	0	N/A
EASTBOUND	74	N/A	N/A	429	N/A	N/A
NORTHBOUND	178	N/A	237	N/A	168	N/A
SOUTHBOUND	121	N/A	398	N/A	178	N/A

EAST-WEST CRITICAL VOLUMES .....	607
NORTH-SOUTH CRITICAL VOLUMES .....	576
THE SUM OF CRITICAL VOLUMES .....	1183
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.719
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 10, LE CONTE AVENUE AND TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	19	390	39	0
EASTBOUND	103	438	101	0
NORTHBOUND	32	59	48	0
SOUTHBOUND	78	63	146	52

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	19	N/A	214	214	N/A	N/A
EASTBOUND	103	N/A	270	270	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	139
SOUTHBOUND	N/A	141	N/A	N/A	146	N/A

EAST-WEST CRITICAL VOLUMES .....	317
NORTH-SOUTH CRITICAL VOLUMES .....	217
	-----
THE SUM OF CRITICAL VOLUMES .....	534
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.303
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 11, LE CONTE AVENUE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	8	73	31	0
EASTBOUND	379	106	0	74
NORTHBOUND	46	639	24	0
SOUTHBOUND	19	461	102	242

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	1	0	0	1	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	8	N/A	N/A	104	N/A	N/A
EASTBOUND	242	242	N/A	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	709
SOUTHBOUND	N/A	218	262	N/A	102	N/A

EAST-WEST CRITICAL VOLUMES ..... 346  
NORTH-SOUTH CRITICAL VOLUMES ..... 728

THE SUM OF CRITICAL VOLUMES ..... 1074

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3\*

CMA VALUE ..... 0.684

LEVEL OF SERVICE ..... B

\* Includes CMA value decreased due to ATSAC Implementation.

Eastbound and Westbound approaches have opposed signal phases.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 12, WEYBURN AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	731	0	121	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	648	0	316
SOUTHBOUND	89	306	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	0	0	1	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	426	N/A	N/A	N/A	N/A	426
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	324	N/A	0	N/A
SOUTHBOUND	89	N/A	153	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	426
NORTH-SOUTH CRITICAL VOLUMES .....	413
	-----
THE SUM OF CRITICAL VOLUMES .....	839
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.489
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 13, WEYBURN AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	92	144	92	0
EASTBOUND	194	166	69	0
NORTHBOUND	102	677	178	0
SOUTHBOUND	94	848	546	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	156	N/A	172	N/A	N/A
EASTBOUND	N/A	197	N/A	232	N/A	N/A
NORTHBOUND	102	N/A	428	428	N/A	N/A
SOUTHBOUND	94	N/A	697	697	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	366
NORTH-SOUTH CRITICAL VOLUMES .....	799
	-----
THE SUM OF CRITICAL VOLUMES .....	1165
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.707
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 14, WEYBURN AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	RIGHT TURNS	
			MIN ON GREEN	MAX ON RED
WESTBOUND	70	138	71	0
EASTBOUND	89	178	105	0
NORTHBOUND	123	707	74	0
SOUTHBOUND	28	923	41	44

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	279
EASTBOUND	N/A	184	N/A	188	N/A	N/A
NORTHBOUND	123	N/A	390	390	N/A	N/A
SOUTHBOUND	N/A	435	516	N/A	41	N/A

EAST-WEST CRITICAL VOLUMES .....	368
NORTH-SOUTH CRITICAL VOLUMES .....	639
	-----
THE SUM OF CRITICAL VOLUMES .....	1007
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.601
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 15, WEYBURN AVENUE AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	** RIGHT TURNS **			
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	92	172	0	0
EASTBOUND	0	101	114	0
NORTHBOUND	108	0	33	46
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	264
EASTBOUND	N/A	N/A	N/A	N/A	N/A	215
NORTHBOUND	108	N/A	N/A	N/A	33	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	307
NORTH-SOUTH CRITICAL VOLUMES .....	108
	-----
THE SUM OF CRITICAL VOLUMES .....	415
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.235
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 16, WEYBURN AVENUE AND TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	78	18	0
EASTBOUND	41	58	0	0
NORTHBOUND	30	134	20	0
SOUTHBOUND	18	0	56	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	96
EASTBOUND	N/A	N/A	N/A	N/A	N/A	99
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	184
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	74

EAST-WEST CRITICAL VOLUMES .....	137
NORTH-SOUTH CRITICAL VOLUMES .....	202
	-----
THE SUM OF CRITICAL VOLUMES .....	339
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.339
LEVEL OF SERVICE .....	A

-----  
Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 17, WEYBURN AVENUE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	13	64	24	0
EASTBOUND	79	65	89	0
NORTHBOUND	28	466	8	0
SOUTHBOUND	17	514	66	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	101
EASTBOUND	N/A	N/A	N/A	N/A	N/A	233
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	502
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	597

EAST-WEST CRITICAL VOLUMES .....	246
NORTH-SOUTH CRITICAL VOLUMES .....	625
	-----
THE SUM OF CRITICAL VOLUMES .....	871
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.511
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 18, KINROSS AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	231	0	101	44
EASTBOUND	0	0	0	0
NORTHBOUND	0	1080	0	54
SOUTHBOUND	40	1254	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	0	0	1	0	3
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	127	N/A	N/A	N/A	101	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	540	N/A	0	N/A
SOUTHBOUND	40	N/A	627	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	127
NORTH-SOUTH CRITICAL VOLUMES .....	627
	-----
THE SUM OF CRITICAL VOLUMES .....	754
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.433
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 19, KINROSS AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	110	58	148	0
EASTBOUND	62	113	85	0
NORTHBOUND	103	655	60	0
SOUTHBOUND	59	806	150	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	110	N/A	N/A	206	N/A	N/A
EASTBOUND	62	N/A	N/A	198	N/A	N/A
NORTHBOUND	103	N/A	358	358	N/A	N/A
SOUTHBOUND	59	N/A	478	478	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	308
NORTH-SOUTH CRITICAL VOLUMES .....	581
THE SUM OF CRITICAL VOLUMES .....	889
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.523
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 20, KINROSS AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	21	80	63	0
EASTBOUND	66	122	89	0
NORTHBOUND	104	777	68	0
SOUTHBOUND	38	968	52	44

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	0	1	0	1	0	0	2
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	21	N/A	N/A	143	N/A	N/A
EASTBOUND	66	N/A	N/A	211	N/A	N/A
NORTHBOUND	N/A	261	N/A	688	N/A	N/A
SOUTHBOUND	N/A	442	564	N/A	52	N/A

EAST-WEST CRITICAL VOLUMES .....	232
NORTH-SOUTH CRITICAL VOLUMES .....	726
	-----
THE SUM OF CRITICAL VOLUMES .....	958
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.569
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 21, KINROSS AVENUE AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	0	0	0
EASTBOUND	106	0	81	157
NORTHBOUND	157	0	40	137
SOUTHBOUND	137	0	26	106

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	0	0
EASTBOUND	1	0	0	0	1	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	1	0	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
EASTBOUND	106	N/A	N/A	N/A	81	N/A
NORTHBOUND	157	N/A	N/A	N/A	40	N/A
SOUTHBOUND	137	N/A	N/A	N/A	26	N/A

EAST-WEST CRITICAL VOLUMES .....	106
NORTH-SOUTH CRITICAL VOLUMES .....	182
	-----
THE SUM OF CRITICAL VOLUMES .....	288
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.288
LEVEL OF SERVICE .....	A

-----  
Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 22, LINDBROOK DRIVE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	213	0	237	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	696	242	0
SOUTHBOUND	108	905	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	213	N/A	N/A	237	N/A	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	0	N/A	469	469	N/A	N/A
SOUTHBOUND	108	N/A	452	452	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	237
NORTH-SOUTH CRITICAL VOLUMES .....	577
	-----
THE SUM OF CRITICAL VOLUMES .....	814
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.473
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 23, LINDBROOK DRIVE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	100	244	122	0
EASTBOUND	37	128	99	0
NORTHBOUND	89	932	197	64
SOUTHBOUND	30	988	74	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	0	1	1	0	1	0	3
SOUTHBOUND	0	1	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	226	N/A	240	N/A	N/A
EASTBOUND	N/A	117	N/A	148	N/A	N/A
NORTHBOUND	N/A	319	702	N/A	197	N/A
SOUTHBOUND	N/A	271	410	410	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	277
NORTH-SOUTH CRITICAL VOLUMES .....	732
	-----
THE SUM OF CRITICAL VOLUMES .....	1009
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.603
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 24, LINDBROOK DRIVE AND GLENDON AVENUE/TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	316	529	124	0
EASTBOUND	104	344	58	0
NORTHBOUND	54	316	62	188
SOUTHBOUND	115	135	88	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	0	1	0	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	325	N/A	644	N/A	N/A
EASTBOUND	N/A	135	N/A	371	N/A	N/A
NORTHBOUND	54	N/A	316	N/A	62	N/A
SOUTHBOUND	115	N/A	N/A	223	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	748
NORTH-SOUTH CRITICAL VOLUMES .....	431
	-----
THE SUM OF CRITICAL VOLUMES .....	1179
NUMBER OF CRITICAL CLEARANCE INTERVALS .....	2
CMA VALUE .....	0.716
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 25, LINDBROOK DRIVE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	80	42	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	490	0	140
SOUTHBOUND	45	577	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	1	0	1	0	2
SOUTHBOUND	0	1	0	0	0	0	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	122
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	490	N/A	0	N/A
SOUTHBOUND	N/A	622	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	122
NORTH-SOUTH CRITICAL VOLUMES .....	622
	-----
THE SUM OF CRITICAL VOLUMES .....	744
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.496
LEVEL OF SERVICE .....	A

-----  
Capacity assumed = 1500.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 26, WILSHIRE BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	341	3246	284	0
EASTBOUND	243	2849	251	0
NORTHBOUND	171	727	222	0
SOUTHBOUND	82	307	78	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	1	0	3	1	0	0	5
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	188	N/A	882	882	N/A	N/A
EASTBOUND	243	N/A	775	775	N/A	N/A
NORTHBOUND	171	N/A	474	474	N/A	N/A
SOUTHBOUND	82	N/A	192	192	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	1125
NORTH-SOUTH CRITICAL VOLUMES .....	556
	-----
THE SUM OF CRITICAL VOLUMES .....	1681
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	5
CMA VALUE .....	1.153
LEVEL OF SERVICE .....	F

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 27, WILSHIRE BOULEVARD AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	76	2707	50	0
EASTBOUND	221	2929	154	0
NORTHBOUND	279	676	98	21
SOUTHBOUND	63	316	808	122

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	42	N/A	689	689	N/A	N/A
EASTBOUND	122	N/A	771	771	N/A	N/A
NORTHBOUND	279	N/A	338	N/A	98	N/A
SOUTHBOUND	63	N/A	316	N/A	404	N/A

EAST-WEST CRITICAL VOLUMES .....	813
NORTH-SOUTH CRITICAL VOLUMES .....	683
	-----
THE SUM OF CRITICAL VOLUMES .....	1496
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.980
LEVEL OF SERVICE .....	E

-----  
\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 28, WILSHIRE BOULEVARD AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	37	1851	98	0
EASTBOUND	458	2454	110	0
NORTHBOUND	91	337	41	49
SOUTHBOUND	111	234	296	504

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	37	N/A	487	487	N/A	N/A
EASTBOUND	252	N/A	641	641	N/A	N/A
NORTHBOUND	91	N/A	168	N/A	41	N/A
SOUTHBOUND	111	N/A	234	N/A	148	N/A

EAST-WEST CRITICAL VOLUMES .....	739
NORTH-SOUTH CRITICAL VOLUMES .....	325
	-----
THE SUM OF CRITICAL VOLUMES .....	1064
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.677
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 29, WILSHIRE BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	183	1676	84	0
EASTBOUND	367	2273	193	0
NORTHBOUND	153	778	268	0
SOUTHBOUND	114	727	106	202

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	1	0	0	4
SOUTHBOUND	1	0	3	0	1	0	5

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	101	N/A	440	440	N/A	N/A
EASTBOUND	202	N/A	616	616	N/A	N/A
NORTHBOUND	153	N/A	349	349	N/A	N/A
SOUTHBOUND	114	N/A	242	N/A	106	N/A

EAST-WEST CRITICAL VOLUMES .....	717
NORTH-SOUTH CRITICAL VOLUMES .....	463
	-----
THE SUM OF CRITICAL VOLUMES .....	1180
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	4
CMA VALUE .....	0.788
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 30, WILSHIRE BOULEVARD AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	126	1765	209	0
EASTBOUND	268	2419	66	0
NORTHBOUND	92	82	53	0
SOUTHBOUND	149	97	126	126

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	126	N/A	494	494	N/A	N/A
EASTBOUND	147	N/A	621	621	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	227
SOUTHBOUND	149	N/A	97	N/A	63	N/A

EAST-WEST CRITICAL VOLUMES .....	747
NORTH-SOUTH CRITICAL VOLUMES .....	376
	-----
THE SUM OF CRITICAL VOLUMES .....	1123
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.718
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 31, WILSHIRE BOULEVARD AND SELBY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	54	2181	65	0
EASTBOUND	28	2390	0	61
NORTHBOUND	47	54	97	0
SOUTHBOUND	134	46	0	15

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	54	N/A	749	749	N/A	N/A
EASTBOUND	28	N/A	797	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	198
SOUTHBOUND	N/A	180	N/A	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	851
NORTH-SOUTH CRITICAL VOLUMES .....	332
	-----
THE SUM OF CRITICAL VOLUMES .....	1183
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.719
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 32, WILSHIRE BOULEVARD AND WESTHOLME AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	51	2266	68	0
EASTBOUND	60	2511	17	20
NORTHBOUND	41	75	72	0
SOUTHBOUND	115	158	29	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	51	N/A	778	778	N/A	N/A
EASTBOUND	60	N/A	837	N/A	17	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	188
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	302

EAST-WEST CRITICAL VOLUMES .....	888
NORTH-SOUTH CRITICAL VOLUMES .....	343
	-----
THE SUM OF CRITICAL VOLUMES .....	1231
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.794
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 33, WILSHIRE BOULEVARD AND WARNER AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	33	2107	44	0
EASTBOUND	76	2387	38	0
NORTHBOUND	33	47	5	16
SOUTHBOUND	68	64	0	43

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	2	1	0	0	4
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	33	N/A	717	717	N/A	N/A
EASTBOUND	76	N/A	808	808	N/A	N/A
NORTHBOUND	33	N/A	47	N/A	5	N/A
SOUTHBOUND	68	N/A	64	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	841
NORTH-SOUTH CRITICAL VOLUMES .....	115
	-----
THE SUM OF CRITICAL VOLUMES .....	956
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.601
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 34, WELLWORTH AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	273	145	58	0
EASTBOUND	20	60	62	0
NORTHBOUND	50	1064	78	0
SOUTHBOUND	64	1115	64	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	476
EASTBOUND	N/A	N/A	N/A	N/A	N/A	142
NORTHBOUND	50	N/A	571	571	N/A	N/A
SOUTHBOUND	64	N/A	590	590	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	496
NORTH-SOUTH CRITICAL VOLUMES .....	640
	-----
THE SUM OF CRITICAL VOLUMES .....	1136
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.687
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 35, OHIO AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	** RIGHT TURNS **			
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	72	279	44	0
EASTBOUND	166	368	18	51
NORTHBOUND	102	1003	51	0
SOUTHBOUND	52	1244	228	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	1	0	1	0	3
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	72	N/A	N/A	323	N/A	N/A
EASTBOUND	166	N/A	368	N/A	18	N/A
NORTHBOUND	102	N/A	527	527	N/A	N/A
SOUTHBOUND	52	N/A	736	736	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	489
NORTH-SOUTH CRITICAL VOLUMES .....	838
	-----
THE SUM OF CRITICAL VOLUMES .....	1327
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.815
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 36, SANTA MONICA BOULEVARD (N I/S) AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: EXISTING (2001)

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	140	1419	142	0
EASTBOUND	169	1649	63	0
NORTHBOUND	98	1125	63	0
SOUTHBOUND	82	994	36	96

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	2	1	0	0	4
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	140	N/A	520	520	N/A	N/A
EASTBOUND	169	N/A	571	571	N/A	N/A
NORTHBOUND	98	N/A	594	594	N/A	N/A
SOUTHBOUND	82	N/A	497	N/A	36	N/A

EAST-WEST CRITICAL VOLUMES .....	711
NORTH-SOUTH CRITICAL VOLUMES .....	676
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THE SUM OF CRITICAL VOLUMES .....	1387
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.903
LEVEL OF SERVICE .....	E

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 1, SUNSET BOULEVARD AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	316	1102	0	0
EASTBOUND	0	2125	374	0
NORTHBOUND	60	0	65	158
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	0	0	0	3
EASTBOUND	0	0	1	1	0	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	316	N/A	551	N/A	N/A	N/A
EASTBOUND	N/A	N/A	1250	1250	N/A	N/A
NORTHBOUND	60	N/A	N/A	N/A	65	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	1566
NORTH-SOUTH CRITICAL VOLUMES .....	65
THE SUM OF CRITICAL VOLUMES .....	1631
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	1.075
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 2, SUNSET BOULEVARD AND HILGARD AVENUE/COPA DE ORO ROAD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	539	1182	27	0
EASTBOUND	27	1247	323	0
NORTHBOUND	195	29	0	113
SOUTHBOUND	53	105	17	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	0	0	1	1	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	539	N/A	604	604	N/A	N/A
EASTBOUND	27	N/A	785	785	N/A	N/A
NORTHBOUND	112	112	N/A	N/A	0	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	175

EAST-WEST CRITICAL VOLUMES ..... 1324  
NORTH-SOUTH CRITICAL VOLUMES ..... 287  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1611  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*  
  
CMA VALUE ..... 1.102  
  
LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 3, SUNSET BOULEVARD AND BEVERLY GLEN BLVD./BEL AIR ROAD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	664	1762	59	0
EASTBOUND	20	1163	95	0
NORTHBOUND	55	46	0	332
SOUTHBOUND	108	81	26	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	664	N/A	910	910	N/A	N/A
EASTBOUND	20	N/A	629	629	N/A	N/A
NORTHBOUND	55	N/A	46	N/A	0	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	215

EAST-WEST CRITICAL VOLUMES ..... 1292  
NORTH-SOUTH CRITICAL VOLUMES ..... 270

THE SUM OF CRITICAL VOLUMES ..... 1562

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*

CMA VALUE ..... 1.066

LEVEL OF SERVICE ..... F

\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 4, MONTANA BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	74	122	102	0
EASTBOUND	12	378	84	0
NORTHBOUND	102	333	504	37
SOUTHBOUND	466	983	90	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	101	N/A	198	N/A	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	474
NORTHBOUND	102	N/A	166	N/A	504	N/A
SOUTHBOUND	466	N/A	536	536	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	548
NORTH-SOUTH CRITICAL VOLUMES .....	970
	-----
THE SUM OF CRITICAL VOLUMES .....	1518
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.995
LEVEL OF SERVICE .....	E

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 5, MONTANA BOULEVARD/GAYLEY AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	13	109	40	0
EASTBOUND	118	781	47	0
NORTHBOUND	94	337	34	0
SOUTHBOUND	133	425	37	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	162
EASTBOUND	N/A	N/A	N/A	N/A	N/A	946
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	465
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	595

EAST-WEST CRITICAL VOLUMES ..... 959  
NORTH-SOUTH CRITICAL VOLUMES ..... 689  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1648  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 1.029  
  
LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 6, WYTON DRIVE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	25	120	50	0
EASTBOUND	18	34	5	116
NORTHBOUND	233	287	18	0
SOUTHBOUND	50	658	478	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	0	1	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	195
EASTBOUND	N/A	52	N/A	N/A	5	N/A
NORTHBOUND	233	N/A	152	152	N/A	N/A
SOUTHBOUND	50	N/A	568	568	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	213
NORTH-SOUTH CRITICAL VOLUMES .....	801
	-----
THE SUM OF CRITICAL VOLUMES .....	1014
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.606
LEVEL OF SERVICE .....	B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 7, LEVERING AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	0	1	0
EASTBOUND	48	0	315	0
NORTHBOUND	58	446	5	0
SOUTHBOUND	0	429	41	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	1
EASTBOUND	N/A	N/A	N/A	N/A	N/A	363
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	509
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	470

EAST-WEST CRITICAL VOLUMES .....	363
NORTH-SOUTH CRITICAL VOLUMES .....	528
	-----
THE SUM OF CRITICAL VOLUMES .....	891
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.524
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 8, LE CONTE AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	223	59	221	62
EASTBOUND	63	71	16	0
NORTHBOUND	12	945	190	0
SOUTHBOUND	123	308	7	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	223	N/A	59	N/A	221	N/A
EASTBOUND	63	N/A	N/A	87	N/A	N/A
NORTHBOUND	12	N/A	568	568	N/A	N/A
SOUTHBOUND	123	N/A	158	158	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	310
NORTH-SOUTH CRITICAL VOLUMES .....	691
	-----
THE SUM OF CRITICAL VOLUMES .....	1001
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.597
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 9, LE CONTE AVENUE AND WESTWOOD PLAZA/WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	152	357	90	31
EASTBOUND	132	315	54	0
NORTHBOUND	130	867	221	76
SOUTHBOUND	62	244	22	82

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	152	N/A	357	N/A	90	N/A
EASTBOUND	132	N/A	N/A	369	N/A	N/A
NORTHBOUND	130	N/A	434	N/A	221	N/A
SOUTHBOUND	62	N/A	122	N/A	22	N/A

EAST-WEST CRITICAL VOLUMES .....	521
NORTH-SOUTH CRITICAL VOLUMES .....	496
	-----
THE SUM OF CRITICAL VOLUMES .....	1017
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.608
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 10, LE CONTE AVENUE AND TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	23	469	71	0
EASTBOUND	158	338	44	0
NORTHBOUND	19	108	26	0
SOUTHBOUND	49	40	200	79

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	23	N/A	270	270	N/A	N/A
EASTBOUND	158	N/A	191	191	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	153
SOUTHBOUND	N/A	89	N/A	N/A	200	N/A

EAST-WEST CRITICAL VOLUMES .....	428
NORTH-SOUTH CRITICAL VOLUMES .....	219
THE SUM OF CRITICAL VOLUMES .....	647
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.367
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 11, LE CONTE AVENUE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	27	142	8	0
EASTBOUND	302	49	0	53
NORTHBOUND	43	593	32	0
SOUTHBOUND	13	332	222	176

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	1	0	0	1	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	27	N/A	N/A	150	N/A	N/A
EASTBOUND	176	176	N/A	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	668
SOUTHBOUND	N/A	159	186	N/A	222	N/A

EAST-WEST CRITICAL VOLUMES .....	326
NORTH-SOUTH CRITICAL VOLUMES .....	681
	-----
THE SUM OF CRITICAL VOLUMES .....	1007
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3*
CMA VALUE .....	0.637
LEVEL OF SERVICE .....	B

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\* Includes CMA value decreased due to ATSAC Implementation.

Eastbound and Westbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 12, WEYBURN AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	318	0	67	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	297	417	192
SOUTHBOUND	165	759	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	0	0	1	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	192	N/A	N/A	N/A	N/A	192
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	148	N/A	417	N/A
SOUTHBOUND	165	N/A	380	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	192
NORTH-SOUTH CRITICAL VOLUMES .....	582
	-----
THE SUM OF CRITICAL VOLUMES .....	774
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.446
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 13, WEYBURN AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	38	99	36	0
EASTBOUND	411	256	67	0
NORTHBOUND	81	781	157	0
SOUTHBOUND	30	378	218	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	75	N/A	98	N/A	N/A
EASTBOUND	411	N/A	N/A	323	N/A	N/A
NORTHBOUND	81	N/A	469	469	N/A	N/A
SOUTHBOUND	30	N/A	298	298	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	509
NORTH-SOUTH CRITICAL VOLUMES .....	499
	-----
THE SUM OF CRITICAL VOLUMES .....	1008
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.602
LEVEL OF SERVICE .....	B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 14, WEYBURN AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	30	88	39	0
EASTBOUND	69	131	45	0
NORTHBOUND	68	1114	34	0
SOUTHBOUND	16	368	4	34

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	157
EASTBOUND	N/A	122	N/A	122	N/A	N/A
NORTHBOUND	68	N/A	574	574	N/A	N/A
SOUTHBOUND	N/A	154	230	N/A	4	N/A

EAST-WEST CRITICAL VOLUMES .....	226
NORTH-SOUTH CRITICAL VOLUMES .....	590
	-----
THE SUM OF CRITICAL VOLUMES .....	816
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.474
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 15, WEYBURN AVENUE AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	56	119	0	0
EASTBOUND	0	153	63	0
NORTHBOUND	71	0	14	28
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	175
EASTBOUND	N/A	N/A	N/A	N/A	N/A	216
NORTHBOUND	71	N/A	N/A	N/A	14	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	272
NORTH-SOUTH CRITICAL VOLUMES .....	71
	-----
THE SUM OF CRITICAL VOLUMES .....	343
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.194
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 16, WEYBURN AVENUE AND TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	93	13	0
EASTBOUND	49	83	0	0
NORTHBOUND	21	121	22	0
SOUTHBOUND	31	0	67	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	106
EASTBOUND	N/A	N/A	N/A	N/A	N/A	132
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	164
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	98

EAST-WEST CRITICAL VOLUMES .....	155
NORTH-SOUTH CRITICAL VOLUMES .....	194
	-----
THE SUM OF CRITICAL VOLUMES .....	349
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.349
LEVEL OF SERVICE .....	A

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Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 17, WEYBURN AVENUE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	4	37	34	0
EASTBOUND	45	13	38	0
NORTHBOUND	23	544	11	0
SOUTHBOUND	13	340	62	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	75
EASTBOUND	N/A	N/A	N/A	N/A	N/A	96
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	578
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	415

EAST-WEST CRITICAL VOLUMES .....	120
NORTH-SOUTH CRITICAL VOLUMES .....	591
	-----
THE SUM OF CRITICAL VOLUMES .....	711
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.404
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 18, KINROSS AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	53	0	0	34
EASTBOUND	0	0	0	0
NORTHBOUND	0	948	282	14
SOUTHBOUND	104	877	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	0	0	1	0	3
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	29	N/A	N/A	N/A	0	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	474	N/A	282	N/A
SOUTHBOUND	104	N/A	438	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	29
NORTH-SOUTH CRITICAL VOLUMES .....	578
	-----
THE SUM OF CRITICAL VOLUMES .....	607
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.344
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 19, KINROSS AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	44	82	60	0
EASTBOUND	21	39	57	0
NORTHBOUND	158	859	61	0
SOUTHBOUND	38	472	45	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	44	N/A	N/A	142	N/A	N/A
EASTBOUND	21	N/A	N/A	96	N/A	N/A
NORTHBOUND	158	N/A	460	460	N/A	N/A
SOUTHBOUND	38	N/A	258	258	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	163
NORTH-SOUTH CRITICAL VOLUMES .....	498
	-----
THE SUM OF CRITICAL VOLUMES .....	661
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.375
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 20, KINROSS AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	4	60	56	0
EASTBOUND	34	47	59	0
NORTHBOUND	46	1144	43	0
SOUTHBOUND	11	387	11	17

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	0	1	0	1	0	0	2
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	4	N/A	N/A	116	N/A	N/A
EASTBOUND	34	N/A	N/A	106	N/A	N/A
NORTHBOUND	N/A	594	N/A	640	N/A	N/A
SOUTHBOUND	N/A	172	226	N/A	11	N/A

EAST-WEST CRITICAL VOLUMES .....	150
NORTH-SOUTH CRITICAL VOLUMES .....	651
	-----
THE SUM OF CRITICAL VOLUMES .....	801
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.464
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 21, KINROSS AVENUE AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	0	0	0
EASTBOUND	40	0	0	47
NORTHBOUND	113	0	108	20
SOUTHBOUND	67	0	8	20

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	0	0
EASTBOUND	1	0	0	0	1	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	1	0	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
EASTBOUND	40	N/A	N/A	N/A	0	N/A
NORTHBOUND	113	N/A	N/A	N/A	108	N/A
SOUTHBOUND	67	N/A	N/A	N/A	8	N/A

EAST-WEST CRITICAL VOLUMES .....	40
NORTH-SOUTH CRITICAL VOLUMES .....	174
	-----
THE SUM OF CRITICAL VOLUMES .....	214
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.214
LEVEL OF SERVICE .....	A

-----  
Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 22, LINDBROOK DRIVE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	108	0	98	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	929	170	0
SOUTHBOUND	96	487	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	108	N/A	N/A	98	N/A	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	0	N/A	550	550	N/A	N/A
SOUTHBOUND	96	N/A	244	244	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	108
NORTH-SOUTH CRITICAL VOLUMES .....	646
	-----
THE SUM OF CRITICAL VOLUMES .....	754
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.433
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 23, LINDBROOK DRIVE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	132	160	39	0
EASTBOUND	32	175	79	0
NORTHBOUND	35	1147	213	66
SOUTHBOUND	29	396	20	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	0	1	1	0	1	0	3
SOUTHBOUND	0	1	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	148	N/A	184	N/A	N/A
EASTBOUND	N/A	143	N/A	143	N/A	N/A
NORTHBOUND	N/A	572	610	N/A	213	N/A
SOUTHBOUND	N/A	52	197	197	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	275
NORTH-SOUTH CRITICAL VOLUMES .....	639
	-----
THE SUM OF CRITICAL VOLUMES .....	914
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.539
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 24, LINDBROOK DRIVE AND GLENDON AVENUE/TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	61	312	175	0
EASTBOUND	71	394	15	0
NORTHBOUND	96	564	354	43
SOUTHBOUND	59	120	6	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	0	1	0	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	242	N/A	306	N/A	N/A
EASTBOUND	N/A	189	N/A	291	N/A	N/A
NORTHBOUND	96	N/A	564	N/A	354	N/A
SOUTHBOUND	59	N/A	N/A	126	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	377
NORTH-SOUTH CRITICAL VOLUMES .....	623
	-----
THE SUM OF CRITICAL VOLUMES .....	1000
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.597
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 25, LINDBROOK DRIVE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	92	42	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	509	0	71
SOUTHBOUND	17	322	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	1	0	1	0	2
SOUTHBOUND	0	1	0	0	0	0	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	134
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	509	N/A	0	N/A
SOUTHBOUND	N/A	339	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 134  
NORTH-SOUTH CRITICAL VOLUMES ..... 525  
-----  
THE SUM OF CRITICAL VOLUMES ..... 659  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 0\*  
  
CMA VALUE ..... 0.439  
  
LEVEL OF SERVICE ..... A

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Capacity assumed = 1500.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 26, WILSHIRE BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	142	3651	69	0
EASTBOUND	63	3673	203	0
NORTHBOUND	226	286	252	0
SOUTHBOUND	259	682	233	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	1	0	3	1	0	0	5
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	78	N/A	930	930	N/A	N/A
EASTBOUND	63	N/A	969	969	N/A	N/A
NORTHBOUND	226	N/A	269	269	N/A	N/A
SOUTHBOUND	259	N/A	458	458	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 1047  
NORTH-SOUTH CRITICAL VOLUMES ..... 684  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1731  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 5  
  
CMA VALUE ..... 1.189  
  
LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 27, WILSHIRE BOULEVARD AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	100	2571	42	0
EASTBOUND	360	4171	206	0
NORTHBOUND	106	556	220	28
SOUTHBOUND	288	288	315	198

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	55	N/A	653	653	N/A	N/A
EASTBOUND	198	N/A	1094	1094	N/A	N/A
NORTHBOUND	106	N/A	278	N/A	220	N/A
SOUTHBOUND	288	N/A	201	201	201	N/A

EAST-WEST CRITICAL VOLUMES ..... 1149  
NORTH-SOUTH CRITICAL VOLUMES ..... 566  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1715  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3  
  
CMA VALUE ..... 1.134  
  
LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 28, WILSHIRE BOULEVARD AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	132	2313	59	0
EASTBOUND	631	3109	136	0
NORTHBOUND	69	372	0	22
SOUTHBOUND	96	104	0	325

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL LANES
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	132	N/A	593	593	N/A	N/A
EASTBOUND	347	N/A	811	811	N/A	N/A
NORTHBOUND	69	N/A	186	N/A	0	N/A
SOUTHBOUND	96	N/A	104	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	943
NORTH-SOUTH CRITICAL VOLUMES .....	282
	-----
THE SUM OF CRITICAL VOLUMES .....	1225
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.790
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 29, WILSHIRE BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	168	2261	133	0
EASTBOUND	533	2411	157	0
NORTHBOUND	109	784	140	0
SOUTHBOUND	63	314	0	220

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	1	0	0	4
SOUTHBOUND	1	0	3	0	1	0	5

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	92	N/A	598	598	N/A	N/A
EASTBOUND	293	N/A	642	642	N/A	N/A
NORTHBOUND	109	N/A	308	308	N/A	N/A
SOUTHBOUND	63	N/A	105	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	891
NORTH-SOUTH CRITICAL VOLUMES .....	371
	-----
THE SUM OF CRITICAL VOLUMES .....	1262
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	4
CMA VALUE .....	0.848
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 30, WILSHIRE BOULEVARD AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	79	2325	226	0
EASTBOUND	340	1954	226	0
NORTHBOUND	20	128	16	0
SOUTHBOUND	71	50	13	94

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	79	N/A	638	638	N/A	N/A
EASTBOUND	187	N/A	545	545	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	164
SOUTHBOUND	71	N/A	50	N/A	6	N/A

EAST-WEST CRITICAL VOLUMES .....	825
NORTH-SOUTH CRITICAL VOLUMES .....	235
	-----
THE SUM OF CRITICAL VOLUMES .....	1060
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.674
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 31, WILSHIRE BOULEVARD AND SELBY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	67	3068	77	0
EASTBOUND	24	1994	0	37
NORTHBOUND	87	79	96	0
SOUTHBOUND	115	38	35	12

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	67	N/A	1048	1048	N/A	N/A
EASTBOUND	24	N/A	665	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	262
SOUTHBOUND	N/A	153	N/A	N/A	35	N/A

EAST-WEST CRITICAL VOLUMES ..... 1072  
 NORTH-SOUTH CRITICAL VOLUMES ..... 377  
 -----  
 THE SUM OF CRITICAL VOLUMES ..... 1449  
  
 NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
 CMA VALUE ..... 0.896  
  
 LEVEL OF SERVICE ..... D

-----  
 \* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 32, WILSHIRE BOULEVARD AND WESTHOLME AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	38	2621	123	0
EASTBOUND	47	2320	0	74
NORTHBOUND	56	186	68	0
SOUTHBOUND	56	59	35	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	38	N/A	915	915	N/A	N/A
EASTBOUND	47	N/A	773	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	310
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	150

EAST-WEST CRITICAL VOLUMES .....	962
NORTH-SOUTH CRITICAL VOLUMES .....	366
	-----
THE SUM OF CRITICAL VOLUMES .....	1328
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.862
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 33, WILSHIRE BOULEVARD AND WARNER AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	16	2678	82	0
EASTBOUND	92	2369	22	0
NORTHBOUND	94	66	0	35
SOUTHBOUND	87	82	70	46

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	2	1	0	0	4
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	16	N/A	920	920	N/A	N/A
EASTBOUND	92	N/A	797	797	N/A	N/A
NORTHBOUND	94	N/A	66	N/A	0	N/A
SOUTHBOUND	87	N/A	82	N/A	70	N/A

EAST-WEST CRITICAL VOLUMES .....	1012
NORTH-SOUTH CRITICAL VOLUMES .....	176
	-----
THE SUM OF CRITICAL VOLUMES .....	1188
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.764
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATFSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 34, WELLWORTH AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	75	69	87	0
EASTBOUND	32	79	62	0
NORTHBOUND	66	1250	240	0
SOUTHBOUND	24	457	11	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	231
EASTBOUND	N/A	N/A	N/A	N/A	N/A	173
NORTHBOUND	66	N/A	745	745	N/A	N/A
SOUTHBOUND	24	N/A	234	234	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 263  
NORTH-SOUTH CRITICAL VOLUMES ..... 769  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1032  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 0.618  
  
LEVEL OF SERVICE ..... B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 35, OHIO AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	76	353	42	0
EASTBOUND	211	336	0	83
NORTHBOUND	85	1304	30	0
SOUTHBOUND	25	551	76	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	1	0	1	0	3
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	76	N/A	N/A	395	N/A	N/A
EASTBOUND	211	N/A	336	N/A	0	N/A
NORTHBOUND	85	N/A	667	667	N/A	N/A
SOUTHBOUND	25	N/A	314	314	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	606
NORTH-SOUTH CRITICAL VOLUMES .....	692
	-----
THE SUM OF CRITICAL VOLUMES .....	1298
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.795
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 36, SANTA MONICA BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	150	1697	209	60
EASTBOUND	208	2161	0	91
NORTHBOUND	62	874	53	0
SOUTHBOUND	120	589	0	85

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	0	1	0	6
EASTBOUND	2	0	3	0	1	0	6
NORTHBOUND	0	1	1	1	0	0	3
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	82	N/A	566	N/A	209	N/A
EASTBOUND	114	N/A	720	N/A	0	N/A
NORTHBOUND	N/A	249	370	370	N/A	N/A
SOUTHBOUND	120	N/A	294	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES ..... 802  
NORTH-SOUTH CRITICAL VOLUMES ..... 490  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1292  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4  
  
CMA VALUE ..... 0.870  
  
LEVEL OF SERVICE ..... D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION:1, SUNSET BOULEVARD AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **
			MIN ON GREEN      MAX ON RED
WESTBOUND	259	1723	0      0
EASTBOUND	0	1464	176      0
NORTHBOUND	320	0	254      130
SOUTHBOUND	0	0	0      0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	0	0	0	3
EASTBOUND	0	0	1	1	0	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	259	N/A	862	N/A	N/A	N/A
EASTBOUND	N/A	N/A	820	820	N/A	N/A
NORTHBOUND	320	N/A	N/A	N/A	254	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	1079
NORTH-SOUTH CRITICAL VOLUMES .....	320
	-----
THE SUM OF CRITICAL VOLUMES .....	1399
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.912
LEVEL OF SERVICE .....	E

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 2, SUNSET BOULEVARD AND HILGARD AVENUE/COPA DE ORO ROAD  
DATE: 10/8/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	343	1291	22	0
EASTBOUND	20	1153	412	0
NORTHBOUND	315	71	267	171
SOUTHBOUND	18	62	11	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	0	0	1	1	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	343	N/A	656	656	N/A	N/A
EASTBOUND	20	N/A	782	782	N/A	N/A
NORTHBOUND	218	N/A	N/A	N/A	218	218
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	91

EAST-WEST CRITICAL VOLUMES ..... 1124  
NORTH-SOUTH CRITICAL VOLUMES ..... 309  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1433  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*  
  
CMA VALUE ..... 0.972  
  
LEVEL OF SERVICE ..... E

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\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 3, SUNSET BOULEVARD AND BEVERLY GLEN BLVD./BEL AIR ROAD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	383	1390	53	0
EASTBOUND	25	1690	70	0
NORTHBOUND	229	127	413	191
SOUTHBOUND	61	56	24	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	383	N/A	722	722	N/A	N/A
EASTBOUND	25	N/A	880	880	N/A	N/A
NORTHBOUND	229	N/A	127	N/A	413	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	141

EAST-WEST CRITICAL VOLUMES ..... 1262  
NORTH-SOUTH CRITICAL VOLUMES ..... 554

THE SUM OF CRITICAL VOLUMES ..... 1816

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*

CMA VALUE ..... 1.251

LEVEL OF SERVICE ..... F

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 4, MONTANA BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	63	346	447	0
EASTBOUND	7	134	42	0
NORTHBOUND	248	1582	20	116
SOUTHBOUND	79	341	32	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	N/A	409	N/A	N/A	447	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	183
NORTHBOUND	248	N/A	791	N/A	20	N/A
SOUTHBOUND	79	N/A	186	186	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 454  
NORTH-SOUTH CRITICAL VOLUMES ..... 870  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1324  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3  
  
CMA VALUE ..... 0.859  
  
LEVEL OF SERVICE ..... D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 5, MONTANA BOULEVARD/GAYLEY AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	32	658	261	0
EASTBOUND	53	269	59	0
NORTHBOUND	113	395	61	0
SOUTHBOUND	94	443	85	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	951
EASTBOUND	N/A	N/A	N/A	N/A	N/A	381
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	569
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	622

EAST-WEST CRITICAL VOLUMES .....	1004
NORTH-SOUTH CRITICAL VOLUMES .....	735
	-----
THE SUM OF CRITICAL VOLUMES .....	1739
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	1.089
LEVEL OF SERVICE .....	F

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 6, WYTON DRIVE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	38	44	16	0
EASTBOUND	73	118	198	103
NORTHBOUND	193	830	77	0
SOUTHBOUND	28	507	46	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	0	1	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	98
EASTBOUND	N/A	191	N/A	N/A	198	N/A
NORTHBOUND	193	N/A	454	454	N/A	N/A
SOUTHBOUND	28	N/A	276	276	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	236
NORTH-SOUTH CRITICAL VOLUMES .....	482
	-----
THE SUM OF CRITICAL VOLUMES .....	718
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.409
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 7, LEVERING AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	88	125	56	0
EASTBOUND	1	31	61	0
NORTHBOUND	158	579	57	0
SOUTHBOUND	37	463	7	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	269
EASTBOUND	N/A	N/A	N/A	N/A	N/A	93
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	794
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	507

EAST-WEST CRITICAL VOLUMES .....	270
NORTH-SOUTH CRITICAL VOLUMES .....	831
	-----
THE SUM OF CRITICAL VOLUMES .....	1101
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.664
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 8, LE CONTE AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	383	249	66	167
EASTBOUND	24	121	3	0
NORTHBOUND	53	543	236	0
SOUTHBOUND	263	1312	30	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	383	N/A	249	N/A	66	N/A
EASTBOUND	24	N/A	N/A	124	N/A	N/A
NORTHBOUND	53	N/A	390	390	N/A	N/A
SOUTHBOUND	263	N/A	671	671	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	507
NORTH-SOUTH CRITICAL VOLUMES .....	724
	-----
THE SUM OF CRITICAL VOLUMES .....	1231
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.751
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 9, LE CONTE AVENUE AND WESTWOOD PLAZA/WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	271	508	0	90
EASTBOUND	78	397	102	0
NORTHBOUND	192	501	303	136
SOUTHBOUND	136	840	146	131

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	271	N/A	508	N/A	0	N/A
EASTBOUND	78	N/A	N/A	499	N/A	N/A
NORTHBOUND	192	N/A	250	N/A	303	N/A
SOUTHBOUND	136	N/A	420	N/A	146	N/A

EAST-WEST CRITICAL VOLUMES ..... 770  
NORTH-SOUTH CRITICAL VOLUMES ..... 612  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1382  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 0.851  
  
LEVEL OF SERVICE ..... D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 10, LE CONTE AVENUE AND TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	34	472	41	0
EASTBOUND	108	619	106	0
NORTHBOUND	44	62	65	0
SOUTHBOUND	82	66	138	70

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	34	N/A	256	256	N/A	N/A
EASTBOUND	108	N/A	362	362	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	171
SOUTHBOUND	N/A	148	N/A	N/A	138	N/A

EAST-WEST CRITICAL VOLUMES .....	396
NORTH-SOUTH CRITICAL VOLUMES .....	253
	-----
THE SUM OF CRITICAL VOLUMES .....	649
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.368
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 11, LE CONTE AVENUE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	8	97	33	0
EASTBOUND	454	131	0	176
NORTHBOUND	48	739	25	0
SOUTHBOUND	20	565	126	292

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	1	0	0	1	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	8	N/A	N/A	130	N/A	N/A
EASTBOUND	292	292	N/A	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	812
SOUTHBOUND	N/A	264	320	N/A	126	N/A

EAST-WEST CRITICAL VOLUMES .....	422
NORTH-SOUTH CRITICAL VOLUMES .....	832
	-----
THE SUM OF CRITICAL VOLUMES .....	1254
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3*
CMA VALUE .....	0.810
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

Eastbound and Westbound approaches have opposed signal phases.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 12, WEYBURN AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	824	0	176	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	759	0	393
SOUTHBOUND	141	345	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	0	0	1	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	500	N/A	N/A	N/A	N/A	500
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	380	N/A	0	N/A
SOUTHBOUND	141	N/A	172	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 500  
NORTH-SOUTH CRITICAL VOLUMES ..... 521  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1021  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 0.611  
  
LEVEL OF SERVICE ..... B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 13, WEYBURN AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	117	242	106	0
EASTBOUND	205	252	77	0
NORTHBOUND	113	737	199	0
SOUTHBOUND	106	918	576	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	195	N/A	270	N/A	N/A
EASTBOUND	205	N/A	N/A	329	N/A	N/A
NORTHBOUND	113	N/A	468	468	N/A	N/A
SOUTHBOUND	106	N/A	747	747	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 475  
NORTH-SOUTH CRITICAL VOLUMES ..... 860  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1335  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 0.820  
  
LEVEL OF SERVICE ..... D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 14, WEYBURN AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	81	264	75	0
EASTBOUND	102	308	163	0
NORTHBOUND	162	917	78	0
SOUTHBOUND	30	1061	40	51

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	420
EASTBOUND	N/A	251	N/A	322	N/A	N/A
NORTHBOUND	162	N/A	498	498	N/A	N/A
SOUTHBOUND	N/A	486	605	N/A	40	N/A

EAST-WEST CRITICAL VOLUMES .....	522
NORTH-SOUTH CRITICAL VOLUMES .....	767
	-----
THE SUM OF CRITICAL VOLUMES .....	1289
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.789
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 15, WEYBURN AVENUE AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	148	307	0	0
EASTBOUND	0	227	120	0
NORTHBOUND	114	0	32	74
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	455
EASTBOUND	N/A	N/A	N/A	N/A	N/A	347
NORTHBOUND	114	N/A	N/A	N/A	32	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	495
NORTH-SOUTH CRITICAL VOLUMES .....	114
	-----
THE SUM OF CRITICAL VOLUMES .....	609
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.345
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 16, WEYBURN AVENUE AND TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	130	29	0
EASTBOUND	61	108	0	0
NORTHBOUND	50	159	21	0
SOUTHBOUND	48	0	79	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	159
EASTBOUND	N/A	N/A	N/A	N/A	N/A	169
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	230
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	127

EAST-WEST CRITICAL VOLUMES .....	220
NORTH-SOUTH CRITICAL VOLUMES .....	278
	-----
THE SUM OF CRITICAL VOLUMES .....	498
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.498
LEVEL OF SERVICE .....	A

-----  
Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 17, WEYBURN AVENUE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	14	89	25	0
EASTBOUND	118	90	114	0
NORTHBOUND	29	521	8	0
SOUTHBOUND	18	682	105	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	128
EASTBOUND	N/A	N/A	N/A	N/A	N/A	322
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	558
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	805

EAST-WEST CRITICAL VOLUMES .....	336
NORTH-SOUTH CRITICAL VOLUMES .....	834
	-----
THE SUM OF CRITICAL VOLUMES .....	1170
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.710
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 18, KINROSS AVENUE AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	311	0	129	29
EASTBOUND	0	0	0	0
NORTHBOUND	0	1280	23	86
SOUTHBOUND	44	1397	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	0	0	1	0	3
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	171	N/A	N/A	N/A	129	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	640	N/A	23	N/A
SOUTHBOUND	44	N/A	698	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	171
NORTH-SOUTH CRITICAL VOLUMES .....	698
	-----
THE SUM OF CRITICAL VOLUMES .....	869
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.509
LEVEL OF SERVICE .....	A

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 19, KINROSS AVENUE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	132	85	204	0
EASTBOUND	66	143	107	0
NORTHBOUND	131	798	63	0
SOUTHBOUND	68	924	159	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	132	N/A	N/A	289	N/A	N/A
EASTBOUND	66	N/A	N/A	250	N/A	N/A
NORTHBOUND	131	N/A	430	430	N/A	N/A
SOUTHBOUND	68	N/A	542	542	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	382
NORTH-SOUTH CRITICAL VOLUMES .....	673
	-----
THE SUM OF CRITICAL VOLUMES .....	1055
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.633
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 20, KINROSS AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	22	98	66	0
EASTBOUND	79	142	94	0
NORTHBOUND	109	1012	71	0
SOUTHBOUND	40	1119	66	47

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	0	1	0	1	0	0	2
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	22	N/A	N/A	164	N/A	N/A
EASTBOUND	79	N/A	N/A	236	N/A	N/A
NORTHBOUND	N/A	328	N/A	864	N/A	N/A
SOUTHBOUND	N/A	491	668	N/A	66	N/A

EAST-WEST CRITICAL VOLUMES .....	258
NORTH-SOUTH CRITICAL VOLUMES .....	904
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THE SUM OF CRITICAL VOLUMES .....	1162
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.705
LEVEL OF SERVICE .....	C

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 21, KINROSS AVENUE AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	0	0	0
EASTBOUND	120	0	86	169
NORTHBOUND	169	0	22	178
SOUTHBOUND	178	0	29	120

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	0	0
EASTBOUND	1	0	0	0	1	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	1	0	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
EASTBOUND	120	N/A	N/A	N/A	86	N/A
NORTHBOUND	169	N/A	N/A	N/A	22	N/A
SOUTHBOUND	178	N/A	N/A	N/A	29	N/A

EAST-WEST CRITICAL VOLUMES .....	120
NORTH-SOUTH CRITICAL VOLUMES .....	200
	-----
THE SUM OF CRITICAL VOLUMES .....	320
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.320
LEVEL OF SERVICE .....	A

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Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 22, LINDBROOK DRIVE AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	224	0	265	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	848	254	0
SOUTHBOUND	120	1056	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	224	N/A	N/A	265	N/A	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	0	N/A	551	551	N/A	N/A
SOUTHBOUND	120	N/A	528	528	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	265
NORTH-SOUTH CRITICAL VOLUMES .....	671
	-----
THE SUM OF CRITICAL VOLUMES .....	936
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.554
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 23, LINDBROOK DRIVE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	218	264	128	0
EASTBOUND	39	141	104	0
NORTHBOUND	100	1205	171	109
SOUTHBOUND	33	1155	78	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	0	1	1	0	1	0	3
SOUTHBOUND	0	1	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	280	N/A	330	N/A	N/A
EASTBOUND	N/A	123	N/A	160	N/A	N/A
NORTHBOUND	N/A	402	902	N/A	171	N/A
SOUTHBOUND	N/A	312	477	477	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	378
NORTH-SOUTH CRITICAL VOLUMES .....	935
-----	
THE SUM OF CRITICAL VOLUMES .....	1313
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.805
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 24, LINDBROOK DRIVE AND GLENDON AVENUE/TIVERTON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH		** RIGHT TURNS **	
		MIN ON GREEN	MAX ON RED
WESTBOUND	356	678	150
EASTBOUND	109	392	61
NORTHBOUND	57	372	26
SOUTHBOUND	121	182	92

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	0	1	0	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	367	N/A	817	N/A	N/A
EASTBOUND	N/A	110	N/A	452	N/A	N/A
NORTHBOUND	57	N/A	372	N/A	26	N/A
SOUTHBOUND	121	N/A	N/A	274	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 926  
NORTH-SOUTH CRITICAL VOLUMES ..... 493  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1419  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 0.876  
  
LEVEL OF SERVICE ..... D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 25, LINDBROOK DRIVE AND HILGARD AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	112	45	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	538	0	154
SOUTHBOUND	49	754	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	1	0	1	0	2
SOUTHBOUND	0	1	0	0	0	0	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	157
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	538	N/A	0	N/A
SOUTHBOUND	N/A	803	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	157
NORTH-SOUTH CRITICAL VOLUMES .....	802
	-----
THE SUM OF CRITICAL VOLUMES .....	959
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.639
LEVEL OF SERVICE .....	B

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Capacity assumed = 1500.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 26, WILSHIRE BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	376	3722	298	0
EASTBOUND	255	3214	266	0
NORTHBOUND	181	792	253	0
SOUTHBOUND	90	328	82	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	1	0	3	1	0	0	5
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	207	N/A	1005	1005	N/A	N/A
EASTBOUND	255	N/A	870	870	N/A	N/A
NORTHBOUND	181	N/A	522	522	N/A	N/A
SOUTHBOUND	90	N/A	205	205	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	1260
NORTH-SOUTH CRITICAL VOLUMES .....	612
	-----
THE SUM OF CRITICAL VOLUMES .....	1872
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	5
CMA VALUE .....	1.291
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 27, WILSHIRE BOULEVARD AND VETERAN AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	88	3135	75	0
EASTBOUND	376	3297	162	0
NORTHBOUND	297	721	80	72
SOUTHBOUND	76	355	885	207

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	48	N/A	802	802	N/A	N/A
EASTBOUND	207	N/A	865	865	N/A	N/A
NORTHBOUND	297	N/A	360	N/A	80	N/A
SOUTHBOUND	76	N/A	355	N/A	442	N/A

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EAST-WEST CRITICAL VOLUMES ..... 1009
NORTH-SOUTH CRITICAL VOLUMES ..... 739
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THE SUM OF CRITICAL VOLUMES ..... 1748

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3

CMA VALUE ..... 1.157

LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 28, WILSHIRE BOULEVARD AND GAYLEY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	39	2207	125	0
EASTBOUND	534	2765	116	0
NORTHBOUND	96	396	17	78
SOUTHBOUND	122	287	312	588

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	39	N/A	583	583	N/A	N/A
EASTBOUND	294	N/A	720	720	N/A	N/A
NORTHBOUND	96	N/A	198	N/A	17	N/A
SOUTHBOUND	122	N/A	287	N/A	156	N/A

EAST-WEST CRITICAL VOLUMES .....	877
NORTH-SOUTH CRITICAL VOLUMES .....	383
	-----
THE SUM OF CRITICAL VOLUMES .....	1260
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.814
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 29, WILSHIRE BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	193	1911	158	0
EASTBOUND	460	2506	214	0
NORTHBOUND	168	938	293	0
SOUTHBOUND	154	870	163	253

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	1	0	0	4
SOUTHBOUND	1	0	3	0	1	0	5

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	106	N/A	517	517	N/A	N/A
EASTBOUND	253	N/A	680	680	N/A	N/A
NORTHBOUND	168	N/A	410	410	N/A	N/A
SOUTHBOUND	154	N/A	290	N/A	163	N/A

EAST-WEST CRITICAL VOLUMES .....	786
NORTH-SOUTH CRITICAL VOLUMES .....	564
	-----
THE SUM OF CRITICAL VOLUMES .....	1350
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	4
CMA VALUE .....	0.912
LEVEL OF SERVICE .....	E

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 30, WILSHIRE BOULEVARD AND GLENDON AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	132	2003	243	0
EASTBOUND	296	2679	69	0
NORTHBOUND	98	101	57	0
SOUTHBOUND	216	165	201	128

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	132	N/A	562	562	N/A	N/A
EASTBOUND	163	N/A	687	687	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	256
SOUTHBOUND	216	N/A	165	N/A	100	N/A

EAST-WEST CRITICAL VOLUMES .....	819
NORTH-SOUTH CRITICAL VOLUMES .....	472
	-----
THE SUM OF CRITICAL VOLUMES .....	1291
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.836
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 31, WILSHIRE BOULEVARD AND SELBY AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	57	2449	68	0
EASTBOUND	29	2663	0	75
NORTHBOUND	53	57	102	0
SOUTHBOUND	141	48	0	16

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	57	N/A	839	839	N/A	N/A
EASTBOUND	29	N/A	888	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	212
SOUTHBOUND	N/A	189	N/A	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	945
NORTH-SOUTH CRITICAL VOLUMES .....	353
	-----
THE SUM OF CRITICAL VOLUMES .....	1298
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.795
LEVEL OF SERVICE .....	C

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 32, WILSHIRE BOULEVARD AND WESTHOLME AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	54	2537	71	0
EASTBOUND	63	2768	17	22
NORTHBOUND	43	79	76	0
SOUTHBOUND	121	166	30	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	54	N/A	869	869	N/A	N/A
EASTBOUND	63	N/A	923	N/A	17	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	198
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	317

EAST-WEST CRITICAL VOLUMES .....	977
NORTH-SOUTH CRITICAL VOLUMES .....	360
	-----
THE SUM OF CRITICAL VOLUMES .....	1337
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.868
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 33, WILSHIRE BOULEVARD AND WARNER AVENUE  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	35	2306	46	0
EASTBOUND	80	2649	40	0
NORTHBOUND	62	109	4	18
SOUTHBOUND	71	70	0	45

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	2	1	0	0	4
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	35	N/A	784	784	N/A	N/A
EASTBOUND	80	N/A	896	896	N/A	N/A
NORTHBOUND	62	N/A	109	N/A	4	N/A
SOUTHBOUND	71	N/A	70	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	931
NORTH-SOUTH CRITICAL VOLUMES .....	180
	-----
THE SUM OF CRITICAL VOLUMES .....	1111
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.710
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 34, WELLWORTH AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	302	152	61	0
EASTBOUND	21	67	73	0
NORTHBOUND	53	1255	82	0
SOUTHBOUND	67	1294	67	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	515
EASTBOUND	N/A	N/A	N/A	N/A	N/A	161
NORTHBOUND	53	N/A	668	668	N/A	N/A
SOUTHBOUND	67	N/A	680	680	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	536
NORTH-SOUTH CRITICAL VOLUMES .....	735
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THE SUM OF CRITICAL VOLUMES .....	1271
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.777
LEVEL OF SERVICE .....	C

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 35, OHIO AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	76	293	48	0
EASTBOUND	176	387	19	54
NORTHBOUND	107	1159	54	0
SOUTHBOUND	56	1411	241	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	1	0	1	0	3
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	76	N/A	N/A	341	N/A	N/A
EASTBOUND	176	N/A	387	N/A	19	N/A
NORTHBOUND	107	N/A	606	606	N/A	N/A
SOUTHBOUND	56	N/A	826	826	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	517
NORTH-SOUTH CRITICAL VOLUMES .....	933
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THE SUM OF CRITICAL VOLUMES .....	1450
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.897
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 36, SANTA MONICA BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/9/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITHOUT PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	170	1868	391	54
EASTBOUND	213	2399	49	67
NORTHBOUND	126	1074	88	0
SOUTHBOUND	109	1112	33	136

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	0	1	0	6
EASTBOUND	2	0	3	0	1	0	6
NORTHBOUND	0	1	1	1	0	0	3
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	94	N/A	623	N/A	391	N/A
EASTBOUND	117	N/A	800	N/A	49	N/A
NORTHBOUND	126	N/A	581	581	N/A	N/A
SOUTHBOUND	109	N/A	556	N/A	33	N/A

EAST-WEST CRITICAL VOLUMES .....	894
NORTH-SOUTH CRITICAL VOLUMES .....	690
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THE SUM OF CRITICAL VOLUMES .....	1584
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	4
CMA VALUE .....	1.082
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION:1, SUNSET BOULEVARD AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	317	1102	0	0
EASTBOUND	0	2125	378	0
NORTHBOUND	65	0	66	158
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	0	0	0	3
EASTBOUND	0	0	1	1	0	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	317	N/A	551	N/A	N/A	N/A
EASTBOUND	N/A	N/A	1252	1252	N/A	N/A
NORTHBOUND	65	N/A	N/A	N/A	66	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

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EAST-WEST CRITICAL VOLUMES ..... 1569
NORTH-SOUTH CRITICAL VOLUMES ..... 66
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THE SUM OF CRITICAL VOLUMES ..... 1635

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3

CMA VALUE ..... 1.077

LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 2, SUNSET BOULEVARD AND HILGARD AVENUE/COPA DE ORO ROAD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	544	1182	27	0
EASTBOUND	27	1247	328	0
NORTHBOUND	198	29	0	119
SOUTHBOUND	53	105	17	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	0	0	1	1	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	544	N/A	604	604	N/A	N/A
EASTBOUND	27	N/A	788	788	N/A	N/A
NORTHBOUND	114	114	N/A	N/A	0	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	175

EAST-WEST CRITICAL VOLUMES ..... 1332

NORTH-SOUTH CRITICAL VOLUMES ..... 289

THE SUM OF CRITICAL VOLUMES ..... 1621

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*

CMA VALUE ..... 1.109

LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 3, SUNSET BOULEVARD AND BEVERLY GLEN BLVD./BEL AIR ROAD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	664	1767	59	0
EASTBOUND	21	1168	95	0
NORTHBOUND	55	46	0	332
SOUTHBOUND	108	81	26	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	664	N/A	913	913	N/A	N/A
EASTBOUND	21	N/A	632	632	N/A	N/A
NORTHBOUND	55	N/A	46	N/A	0	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	215

EAST-WEST CRITICAL VOLUMES ..... 1296  
NORTH-SOUTH CRITICAL VOLUMES ..... 270  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1566  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*  
  
CMA VALUE ..... 1.069  
  
LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 4, MONTANA BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	74	123	104	0
EASTBOUND	12	381	84	0
NORTHBOUND	102	333	504	37
SOUTHBOUND	470	983	90	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	N/A	101	N/A	200	N/A	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	477
NORTHBOUND	102	N/A	166	N/A	504	N/A
SOUTHBOUND	470	N/A	536	536	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	551
NORTH-SOUTH CRITICAL VOLUMES .....	974
	-----
THE SUM OF CRITICAL VOLUMES .....	1525
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	1.000
LEVEL OF SERVICE .....	E

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 5, MONTANA BOULEVARD/GAYLEY AVENUE AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	13	112	42	0
EASTBOUND	118	786	49	0
NORTHBOUND	96	341	34	0
SOUTHBOUND	134	429	37	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	167
EASTBOUND	N/A	N/A	N/A	N/A	N/A	953
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	471
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	600

EAST-WEST CRITICAL VOLUMES .....	966
NORTH-SOUTH CRITICAL VOLUMES .....	696
	-----
THE SUM OF CRITICAL VOLUMES .....	1662
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	1.038
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 6, WYTON DRIVE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	26	120	50	0
EASTBOUND	18	34	5	116
NORTHBOUND	233	296	20	0
SOUTHBOUND	50	668	478	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	0	1	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	196
EASTBOUND	N/A	52	N/A	N/A	5	N/A
NORTHBOUND	233	N/A	158	158	N/A	N/A
SOUTHBOUND	50	N/A	573	573	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	214
NORTH-SOUTH CRITICAL VOLUMES .....	806
THE SUM OF CRITICAL VOLUMES .....	1020
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.610
LEVEL OF SERVICE .....	B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 7, LEVERING AVENUE AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	1	1	0
EASTBOUND	48	1	316	0
NORTHBOUND	59	452	5	0
SOUTHBOUND	0	435	41	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	2
EASTBOUND	N/A	N/A	N/A	N/A	N/A	365
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	516
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	476

EAST-WEST CRITICAL VOLUMES .....	365
NORTH-SOUTH CRITICAL VOLUMES .....	535
	-----
THE SUM OF CRITICAL VOLUMES .....	900
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.530
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 8, LE CONTE AVENUE AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	223	62	221	62
EASTBOUND	63	71	16	0
NORTHBOUND	12	947	190	0
SOUTHBOUND	123	314	7	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	223	N/A	62	N/A	221	N/A
EASTBOUND	63	N/A	N/A	87	N/A	N/A
NORTHBOUND	12	N/A	568	568	N/A	N/A
SOUTHBOUND	123	N/A	160	160	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	310
NORTH-SOUTH CRITICAL VOLUMES .....	691
	-----
THE SUM OF CRITICAL VOLUMES .....	1001
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.597
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 9, LE CONTE AVENUE AND WESTWOOD PLAZA/WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	152	360	90	31
EASTBOUND	132	315	54	0
NORTHBOUND	130	869	221	76
SOUTHBOUND	62	246	24	80

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	152	N/A	360	N/A	90	N/A
EASTBOUND	132	N/A	N/A	369	N/A	N/A
NORTHBOUND	130	N/A	434	N/A	221	N/A
SOUTHBOUND	62	N/A	123	N/A	24	N/A

EAST-WEST CRITICAL VOLUMES .....	521
NORTH-SOUTH CRITICAL VOLUMES .....	496
THE SUM OF CRITICAL VOLUMES .....	1017
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.608
LEVEL OF SERVICE .....	B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 10, LE CONTE AVENUE AND TIVERTON AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	23	469	71	0
EASTBOUND	158	338	44	0
NORTHBOUND	22	108	26	0
SOUTHBOUND	49	40	200	79

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	23	N/A	270	270	N/A	N/A
EASTBOUND	158	N/A	191	191	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	156
SOUTHBOUND	N/A	89	N/A	N/A	200	N/A

EAST-WEST CRITICAL VOLUMES .....	428
NORTH-SOUTH CRITICAL VOLUMES .....	222
	-----
THE SUM OF CRITICAL VOLUMES .....	650
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.368
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 11, LE CONTE AVENUE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	31	142	8	0
EASTBOUND	302	49	0	53
NORTHBOUND	43	606	35	0
SOUTHBOUND	13	347	222	176

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	1	0	0	1	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	31	N/A	N/A	150	N/A	N/A
EASTBOUND	176	176	N/A	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	684
SOUTHBOUND	N/A	166	194	N/A	222	N/A

EAST-WEST CRITICAL VOLUMES .....	326
NORTH-SOUTH CRITICAL VOLUMES .....	697
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THE SUM OF CRITICAL VOLUMES .....	1023
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3*
CMA VALUE .....	0.648
LEVEL OF SERVICE .....	B

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\* Includes CMA value decreased due to ATSAC Implementation.

Eastbound and Westbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 12, WEYBURN AVENUE AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	319	0	74	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	297	413	196
SOUTHBOUND	172	759	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	0	0	1	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	196	N/A	N/A	N/A	N/A	196
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	148	N/A	413	N/A
SOUTHBOUND	172	N/A	380	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	196
NORTH-SOUTH CRITICAL VOLUMES .....	585
	-----
THE SUM OF CRITICAL VOLUMES .....	781
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.451
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 13, WEYBURN AVENUE AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	** RIGHT TURNS **			
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	44	107	40	0
EASTBOUND	411	266	67	0
NORTHBOUND	81	781	158	0
SOUTHBOUND	36	380	218	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	81	N/A	110	N/A	N/A
EASTBOUND	411	N/A	N/A	333	N/A	N/A
NORTHBOUND	81	N/A	470	470	N/A	N/A
SOUTHBOUND	36	N/A	299	299	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	521
NORTH-SOUTH CRITICAL VOLUMES .....	506
	-----
THE SUM OF CRITICAL VOLUMES .....	1027
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.615
LEVEL OF SERVICE .....	B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 14, WEYBURN AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	RIGHT TURNS	
			MIN ON GREEN	MAX ON RED
WESTBOUND	65	106	41	0
EASTBOUND	69	147	46	0
NORTHBOUND	68	1114	34	0
SOUTHBOUND	18	368	4	34

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	212
EASTBOUND	N/A	131	N/A	131	N/A	N/A
NORTHBOUND	68	N/A	574	574	N/A	N/A
SOUTHBOUND	N/A	150	236	N/A	4	N/A

EAST-WEST CRITICAL VOLUMES .....	281
NORTH-SOUTH CRITICAL VOLUMES .....	592
	-----
THE SUM OF CRITICAL VOLUMES .....	873
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.512
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 15, WEYBURN AVENUE AND GLENDON AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	92	163	0	0
EASTBOUND	0	153	95	0
NORTHBOUND	90	0	19	46
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	255
EASTBOUND	N/A	N/A	N/A	N/A	N/A	248
NORTHBOUND	90	N/A	N/A	N/A	19	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	340
NORTH-SOUTH CRITICAL VOLUMES .....	90
	-----
THE SUM OF CRITICAL VOLUMES .....	430
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.244
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 16, WEYBURN AVENUE AND TIVERTON AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	129	13	0
EASTBOUND	49	106	0	0
NORTHBOUND	65	124	38	0
SOUTHBOUND	31	0	67	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	142
EASTBOUND	N/A	N/A	N/A	N/A	N/A	155
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	227
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	98

EAST-WEST CRITICAL VOLUMES .....	191
NORTH-SOUTH CRITICAL VOLUMES .....	258
	-----
THE SUM OF CRITICAL VOLUMES .....	449
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.449
LEVEL OF SERVICE .....	A

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Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 17, WEYBURN AVENUE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	4	41	34	0
EASTBOUND	61	17	47	0
NORTHBOUND	23	544	11	0
SOUTHBOUND	13	341	80	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	79
EASTBOUND	N/A	N/A	N/A	N/A	N/A	125
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	578
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	434

EAST-WEST CRITICAL VOLUMES .....	140
NORTH-SOUTH CRITICAL VOLUMES .....	591
	-----
THE SUM OF CRITICAL VOLUMES .....	731
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.417
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 18, KINROSS AVENUE AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	57	0	0	34
EASTBOUND	0	0	0	0
NORTHBOUND	0	951	287	16
SOUTHBOUND	104	878	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	LANES
WESTBOUND	2	0	0	0	1	0	3
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	31	N/A	N/A	N/A	0	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	476	N/A	287	N/A
SOUTHBOUND	104	N/A	439	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 31  
 NORTH-SOUTH CRITICAL VOLUMES ..... 580  
 -----  
 THE SUM OF CRITICAL VOLUMES ..... 611  
  
 NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
 CMA VALUE ..... 0.346  
  
 LEVEL OF SERVICE ..... A

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 \* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 19, KINROSS AVENUE AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	46	86	60	0
EASTBOUND	21	46	57	0
NORTHBOUND	158	860	64	0
SOUTHBOUND	38	480	45	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	46	N/A	N/A	146	N/A	N/A
EASTBOUND	21	N/A	N/A	103	N/A	N/A
NORTHBOUND	158	N/A	462	462	N/A	N/A
SOUTHBOUND	38	N/A	262	262	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	167
NORTH-SOUTH CRITICAL VOLUMES .....	500
	-----
THE SUM OF CRITICAL VOLUMES .....	667
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.378
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 20, KINROSS AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	** RIGHT TURNS **			
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	13	66	56	0
EASTBOUND	34	57	59	0
NORTHBOUND	46	1144	51	0
SOUTHBOUND	11	423	11	17

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	0	1	0	1	0	0	2
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	13	N/A	N/A	122	N/A	N/A
EASTBOUND	34	N/A	N/A	116	N/A	N/A
NORTHBOUND	N/A	594	N/A	648	N/A	N/A
SOUTHBOUND	N/A	190	244	N/A	11	N/A

EAST-WEST CRITICAL VOLUMES .....	156
NORTH-SOUTH CRITICAL VOLUMES .....	659
	-----
THE SUM OF CRITICAL VOLUMES .....	815
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.473
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 21, KINROSS AVENUE AND GLENDON AVENUE  
DATE: 12/30/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	0	0	0	0
EASTBOUND	70	0	0	47
NORTHBOUND	113	0	146	35
SOUTHBOUND	97	0	17	35

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	0	0
EASTBOUND	1	0	0	0	1	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	1	0	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
EASTBOUND	70	N/A	N/A	N/A	0	N/A
NORTHBOUND	113	N/A	N/A	N/A	146	N/A
SOUTHBOUND	97	N/A	N/A	N/A	17	N/A

EAST-WEST CRITICAL VOLUMES .....	70
NORTH-SOUTH CRITICAL VOLUMES .....	242
	-----
THE SUM OF CRITICAL VOLUMES .....	312
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.312
LEVEL OF SERVICE .....	A

-----  
Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 22, LINDBROOK DRIVE AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	110	0	98	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	933	174	0
SOUTHBOUND	98	495	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	110	N/A	N/A	98	N/A	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	0	N/A	554	554	N/A	N/A
SOUTHBOUND	98	N/A	248	248	N/A	N/A

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EAST-WEST CRITICAL VOLUMES ..... 110
NORTH-SOUTH CRITICAL VOLUMES ..... 652
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THE SUM OF CRITICAL VOLUMES ..... 762

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2

CMA VALUE ..... 0.438

LEVEL OF SERVICE ..... A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 23, LINDBROOK DRIVE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	134	160	39	0
EASTBOUND	32	181	79	0
NORTHBOUND	35	1155	231	67
SOUTHBOUND	30	438	22	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	0	1	1	0	1	0	3
SOUTHBOUND	0	1	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	146	N/A	186	N/A	N/A
EASTBOUND	N/A	146	N/A	146	N/A	N/A
NORTHBOUND	N/A	572	618	N/A	231	N/A
SOUTHBOUND	N/A	63	213	213	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	280
NORTH-SOUTH CRITICAL VOLUMES .....	648
	-----
THE SUM OF CRITICAL VOLUMES .....	928
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.549
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 24, LINDBROOK DRIVE AND GLENDON AVENUE/TIVERTON AVENUE  
DATE: 12/30/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS MIN ON GREEN	** MAX ON RED
WESTBOUND	67	312	187	0
EASTBOUND	101	394	15	0
NORTHBOUND	96	604	353	44
SOUTHBOUND	65	140	10	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	0	1	0	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	248	N/A	318	N/A	N/A
EASTBOUND	N/A	180	N/A	330	N/A	N/A
NORTHBOUND	96	N/A	604	N/A	353	N/A
SOUTHBOUND	65	N/A	N/A	150	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	419
NORTH-SOUTH CRITICAL VOLUMES .....	669
	-----
THE SUM OF CRITICAL VOLUMES .....	1088
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.655
LEVEL OF SERVICE .....	B

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\* Includes CMA value decreased due to ATISAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 25, LINDBROOK DRIVE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	99	42	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	509	0	74
SOUTHBOUND	20	329	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	1	0	1	0	2
SOUTHBOUND	0	1	0	0	0	0	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	141
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	509	N/A	0	N/A
SOUTHBOUND	N/A	349	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	141
NORTH-SOUTH CRITICAL VOLUMES .....	529
	-----
THE SUM OF CRITICAL VOLUMES .....	670
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.447
LEVEL OF SERVICE .....	A

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Capacity assumed = 1500.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 26, WILSHIRE BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	147	3678	69	0
EASTBOUND	63	3693	203	0
NORTHBOUND	226	286	256	0
SOUTHBOUND	259	682	233	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	1	0	3	1	0	0	5
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	81	N/A	937	937	N/A	N/A
EASTBOUND	63	N/A	974	974	N/A	N/A
NORTHBOUND	226	N/A	271	271	N/A	N/A
SOUTHBOUND	259	N/A	458	458	N/A	N/A

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EAST-WEST CRITICAL VOLUMES ..... 1055
NORTH-SOUTH CRITICAL VOLUMES ..... 684
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THE SUM OF CRITICAL VOLUMES ..... 1739

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 5

CMA VALUE ..... 1.195

LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 27, WILSHIRE BOULEVARD AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS MIN ON GREEN	** MAX ON RED
WESTBOUND	102	2609	42	0
EASTBOUND	368	4197	206	0
NORTHBOUND	106	558	222	28
SOUTHBOUND	288	288	316	202

\*\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	56	N/A	663	663	N/A	N/A
EASTBOUND	202	N/A	1101	1101	N/A	N/A
NORTHBOUND	106	N/A	279	N/A	222	N/A
SOUTHBOUND	288	N/A	201	201	201	N/A

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EAST-WEST CRITICAL VOLUMES ..... 1157
NORTH-SOUTH CRITICAL VOLUMES ..... 567
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THE SUM OF CRITICAL VOLUMES ..... 1724

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3

CMA VALUE ..... 1.140

LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 28, WILSHIRE BOULEVARD AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	132	2346	59	0
EASTBOUND	634	3134	136	0
NORTHBOUND	69	377	0	22
SOUTHBOUND	96	107	0	332

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	132	N/A	601	601	N/A	N/A
EASTBOUND	349	N/A	818	818	N/A	N/A
NORTHBOUND	69	N/A	188	N/A	0	N/A
SOUTHBOUND	96	N/A	107	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	950
NORTH-SOUTH CRITICAL VOLUMES .....	284
	-----
THE SUM OF CRITICAL VOLUMES .....	1234
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.796
LEVEL OF SERVICE .....	C

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 29, WILSHIRE BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	168	2265	133	0
EASTBOUND	547	2422	157	0
NORTHBOUND	109	797	140	0
SOUTHBOUND	63	329	0	249

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	1	0	0	4
SOUTHBOUND	1	0	3	0	1	0	5

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	92	N/A	600	600	N/A	N/A
EASTBOUND	301	N/A	645	645	N/A	N/A
NORTHBOUND	109	N/A	312	312	N/A	N/A
SOUTHBOUND	63	N/A	110	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES ..... 901  
NORTH-SOUTH CRITICAL VOLUMES ..... 375  
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THE SUM OF CRITICAL VOLUMES ..... 1276  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4  
  
CMA VALUE ..... 0.858  
  
LEVEL OF SERVICE ..... D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 30, WILSHIRE BOULEVARD AND GLENDON AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	79	2325	239	0
EASTBOUND	351	1954	226	0
NORTHBOUND	20	131	16	0
SOUTHBOUND	82	53	15	96

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	79	N/A	641	641	N/A	N/A
EASTBOUND	193	N/A	545	545	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	167
SOUTHBOUND	82	N/A	53	N/A	8	N/A

EAST-WEST CRITICAL VOLUMES ..... 834  
NORTH-SOUTH CRITICAL VOLUMES ..... 249  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1083  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3  
  
CMA VALUE ..... 0.690  
  
LEVEL OF SERVICE ..... B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 31, WILSHIRE BOULEVARD AND SELBY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	67	3081	77	0
EASTBOUND	24	2005	0	37
NORTHBOUND	87	79	96	0
SOUTHBOUND	116	38	35	12

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	67	N/A	1053	1053	N/A	N/A
EASTBOUND	24	N/A	668	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	262
SOUTHBOUND	N/A	154	N/A	N/A	35	N/A

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EAST-WEST CRITICAL VOLUMES ..... 1077
NORTH-SOUTH CRITICAL VOLUMES ..... 378
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THE SUM OF CRITICAL VOLUMES ..... 1455

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2

CMA VALUE ..... 0.900

LEVEL OF SERVICE ..... D

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-----  
\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 32, WILSHIRE BOULEVARD AND WESTHOLME AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	38	2634	123	0
EASTBOUND	47	2332	0	74
NORTHBOUND	56	186	68	0
SOUTHBOUND	58	59	35	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	38	N/A	919	919	N/A	N/A
EASTBOUND	47	N/A	777	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	310
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	152

EAST-WEST CRITICAL VOLUMES .....	966
NORTH-SOUTH CRITICAL VOLUMES .....	368
	-----
THE SUM OF CRITICAL VOLUMES .....	1334
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.866
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 33, WILSHIRE BOULEVARD AND WARNER AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	16	2691	82	0
EASTBOUND	92	2383	22	0
NORTHBOUND	94	66	0	35
SOUTHBOUND	87	82	70	46

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	2	1	0	0	4
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	16	N/A	924	924	N/A	N/A
EASTBOUND	92	N/A	802	802	N/A	N/A
NORTHBOUND	94	N/A	66	N/A	0	N/A
SOUTHBOUND	87	N/A	82	N/A	70	N/A

EAST-WEST CRITICAL VOLUMES ..... 1016  
NORTH-SOUTH CRITICAL VOLUMES ..... 176  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1192  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3  
  
CMA VALUE ..... 0.766  
  
LEVEL OF SERVICE ..... C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 34, WELLWORTH AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	75	69	87	0
EASTBOUND	32	79	62	0
NORTHBOUND	66	1262	240	0
SOUTHBOUND	24	472	11	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	231
EASTBOUND	N/A	N/A	N/A	N/A	N/A	173
NORTHBOUND	66	N/A	751	751	N/A	N/A
SOUTHBOUND	24	N/A	242	242	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	263
NORTH-SOUTH CRITICAL VOLUMES .....	775
	-----
THE SUM OF CRITICAL VOLUMES .....	1038
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.622
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 35, OHIO AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	76	353	44	0
EASTBOUND	212	336	0	83
NORTHBOUND	85	1310	30	0
SOUTHBOUND	27	558	79	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	1	0	1	0	3
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	76	N/A	N/A	397	N/A	N/A
EASTBOUND	212	N/A	336	N/A	0	N/A
NORTHBOUND	85	N/A	670	670	N/A	N/A
SOUTHBOUND	27	N/A	318	318	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	609
NORTH-SOUTH CRITICAL VOLUMES .....	697
	-----
THE SUM OF CRITICAL VOLUMES .....	1306
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.801
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 36, SANTA MONICA BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	150	1697	210	60
EASTBOUND	211	2161	0	91
NORTHBOUND	62	876	53	0
SOUTHBOUND	121	592	0	87

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	LANES
WESTBOUND	2	0	3	0	1	0	6
EASTBOUND	2	0	3	0	1	0	6
NORTHBOUND	0	1	1	1	0	0	3
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	82	N/A	566	N/A	210	N/A
EASTBOUND	116	N/A	720	N/A	0	N/A
NORTHBOUND	N/A	249	371	371	N/A	N/A
SOUTHBOUND	121	N/A	296	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES ..... 802  
NORTH-SOUTH CRITICAL VOLUMES ..... 492  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1294  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4  
  
CMA VALUE ..... 0.871  
  
LEVEL OF SERVICE ..... D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION:1, SUNSET BOULEVARD AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	262	1723	0	0
EASTBOUND	0	1464	186	0
NORTHBOUND	329	0	255	131
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	0	0	0	3
EASTBOUND	0	0	1	1	0	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	262	N/A	862	N/A	N/A	N/A
EASTBOUND	N/A	N/A	825	825	N/A	N/A
NORTHBOUND	329	N/A	N/A	N/A	255	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	1087
NORTH-SOUTH CRITICAL VOLUMES .....	329
	-----
THE SUM OF CRITICAL VOLUMES .....	1416
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.924
LEVEL OF SERVICE .....	E

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 2, SUNSET BOULEVARD AND HILGARD AVENUE/COPA DE ORO ROAD  
DATE: 10/8/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	353	1291	22	0
EASTBOUND	20	1153	421	0
NORTHBOUND	324	71	272	176
SOUTHBOUND	18	62	11	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	0	0	1	1	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	353	N/A	656	656	N/A	N/A
EASTBOUND	20	N/A	787	787	N/A	N/A
NORTHBOUND	222	N/A	N/A	N/A	222	222
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	91

EAST-WEST CRITICAL VOLUMES ..... 1140  
NORTH-SOUTH CRITICAL VOLUMES ..... 313

THE SUM OF CRITICAL VOLUMES ..... 1453

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*

CMA VALUE ..... 0.987

LEVEL OF SERVICE ..... E

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 2, SUNSET BOULEVARD AND HILGARD AVENUE/COPA DE ORO ROAD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	352	1344	17	0
EASTBOUND	20	1176	429	0
NORTHBOUND	323	1101	176	176
SOUTHBOUND	19	58	13	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	0	0	1	1	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	352	N/A	680	680	N/A	N/A
EASTBOUND	20	N/A	802	802	N/A	N/A
NORTHBOUND	712	712	N/A	N/A	176	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	90

EAST-WEST CRITICAL VOLUMES ..... 1154  
NORTH-SOUTH CRITICAL VOLUMES ..... 802

THE SUM OF CRITICAL VOLUMES ..... 1956

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*

CMA VALUE ..... 1.353

LEVEL OF SERVICE ..... F

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 3, SUNSET BOULEVARD AND BEVERLY GLEN BLVD./BEL AIR ROAD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	383	1399	53	0
EASTBOUND	26	1699	70	0
NORTHBOUND	229	127	413	191
SOUTHBOUND	61	56	25	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	383	N/A	726	726	N/A	N/A
EASTBOUND	26	N/A	884	884	N/A	N/A
NORTHBOUND	229	N/A	127	N/A	413	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	142

EAST-WEST CRITICAL VOLUMES ..... 1266  
NORTH-SOUTH CRITICAL VOLUMES ..... 555

THE SUM OF CRITICAL VOLUMES ..... 1821

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*

CMA VALUE ..... 1.254

LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 4, MONTANA BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	63	352	454	0
EASTBOUND	7	140	42	0
NORTHBOUND	248	1582	20	116
SOUTHBOUND	86	341	32	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	415	N/A	N/A	454	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	189
NORTHBOUND	248	N/A	791	N/A	20	N/A
SOUTHBOUND	86	N/A	186	186	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	461
NORTH-SOUTH CRITICAL VOLUMES .....	877
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THE SUM OF CRITICAL VOLUMES .....	1338
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.869
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 5, MONTANA BOULEVARD/GAYLEY AVENUE AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS MIN ON GREEN	** MAX ON RED
WESTBOUND	32	666	263	0
EASTBOUND	53	278	63	0
NORTHBOUND	118	404	61	0
SOUTHBOUND	97	453	85	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	961
EASTBOUND	N/A	N/A	N/A	N/A	N/A	394
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	583
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	635

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EAST-WEST CRITICAL VOLUMES ..... 1014
NORTH-SOUTH CRITICAL VOLUMES ..... 753
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THE SUM OF CRITICAL VOLUMES ..... 1767

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2

CMA VALUE ..... 1.108

LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATISAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 6, WYTON DRIVE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	40	44	16	0
EASTBOUND	73	118	199	102
NORTHBOUND	193	851	79	0
SOUTHBOUND	28	529	46	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	0	1	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	100
EASTBOUND	N/A	191	N/A	N/A	199	N/A
NORTHBOUND	193	N/A	465	465	N/A	N/A
SOUTHBOUND	28	N/A	288	288	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	239
NORTH-SOUTH CRITICAL VOLUMES .....	493
	-----
THE SUM OF CRITICAL VOLUMES .....	732
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.418
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 7, LEVERING AVENUE AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	88	128	56	0
EASTBOUND	1	34	64	0
NORTHBOUND	160	593	57	0
SOUTHBOUND	37	477	7	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	272
EASTBOUND	N/A	N/A	N/A	N/A	N/A	99
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	810
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	521

EAST-WEST CRITICAL VOLUMES .....	273
NORTH-SOUTH CRITICAL VOLUMES .....	847
	-----
THE SUM OF CRITICAL VOLUMES .....	1120
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.677
LEVEL OF SERVICE .....	B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 8, LE CONTE AVENUE AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	383	249	68	168
EASTBOUND	24	121	3	0
NORTHBOUND	53	550	236	0
SOUTHBOUND	263	1324	30	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	383	N/A	249	N/A	68	N/A
EASTBOUND	24	N/A	N/A	124	N/A	N/A
NORTHBOUND	53	N/A	393	393	N/A	N/A
SOUTHBOUND	263	N/A	677	677	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	507
NORTH-SOUTH CRITICAL VOLUMES .....	730
	-----
THE SUM OF CRITICAL VOLUMES .....	1237
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.755
LEVEL OF SERVICE .....	C

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 9, LE CONTE AVENUE AND WESTWOOD PLAZA/WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	271	511	0	90
EASTBOUND	78	397	102	0
NORTHBOUND	192	505	303	136
SOUTHBOUND	136	844	147	130

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	0	1	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	271	N/A	511	N/A	0	N/A
EASTBOUND	78	N/A	N/A	499	N/A	N/A
NORTHBOUND	192	N/A	252	N/A	303	N/A
SOUTHBOUND	136	N/A	422	N/A	147	N/A

EAST-WEST CRITICAL VOLUMES .....	770
NORTH-SOUTH CRITICAL VOLUMES .....	614
	-----
THE SUM OF CRITICAL VOLUMES .....	1384
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.853
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 10, LE CONTE AVENUE AND TIVERTON AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	34	472	41	0
EASTBOUND	108	619	106	0
NORTHBOUND	47	62	65	0
SOUTHBOUND	82	66	138	70

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	34	N/A	256	256	N/A	N/A
EASTBOUND	108	N/A	362	362	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	174
SOUTHBOUND	N/A	148	N/A	N/A	138	N/A

EAST-WEST CRITICAL VOLUMES .....	396
NORTH-SOUTH CRITICAL VOLUMES .....	256
	-----
THE SUM OF CRITICAL VOLUMES .....	652
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.369
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 11, LE CONTE AVENUE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	16	97	33	0
EASTBOUND	454	131	0	176
NORTHBOUND	48	772	33	0
SOUTHBOUND	20	599	126	292

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	1	0	0	1	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	16	N/A	N/A	130	N/A	N/A
EASTBOUND	292	292	N/A	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	853
SOUTHBOUND	N/A	279	340	N/A	126	N/A

EAST-WEST CRITICAL VOLUMES ..... 422  
NORTH-SOUTH CRITICAL VOLUMES ..... 873

THE SUM OF CRITICAL VOLUMES ..... 1295

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3\*

CMA VALUE ..... 0.839

LEVEL OF SERVICE ..... D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

Eastbound and Westbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 12, WEYBURN AVENUE AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	829	0	192	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	759	0	398
SOUTHBOUND	158	345	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	0	0	1	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	510	N/A	N/A	N/A	N/A	510
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	380	N/A	0	N/A
SOUTHBOUND	158	N/A	172	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 510  
NORTH-SOUTH CRITICAL VOLUMES ..... 538  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1048  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 0.629  
  
LEVEL OF SERVICE ..... B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 13, WEYBURN AVENUE AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	125	263	118	0
EASTBOUND	205	274	77	0
NORTHBOUND	113	737	201	0
SOUTHBOUND	119	923	576	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	206	N/A	300	N/A	N/A
EASTBOUND	205	N/A	N/A	351	N/A	N/A
NORTHBOUND	113	N/A	469	469	N/A	N/A
SOUTHBOUND	119	N/A	750	750	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	505
NORTH-SOUTH CRITICAL VOLUMES .....	863
	-----
THE SUM OF CRITICAL VOLUMES .....	1368
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.842
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 14, WEYBURN AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	116	305	79	0
EASTBOUND	102	341	167	0
NORTHBOUND	162	917	78	0
SOUTHBOUND	34	1061	40	51

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	500
EASTBOUND	N/A	258	N/A	352	N/A	N/A
NORTHBOUND	162	N/A	498	498	N/A	N/A
SOUTHBOUND	N/A	480	615	N/A	40	N/A

EAST-WEST CRITICAL VOLUMES .....	602
NORTH-SOUTH CRITICAL VOLUMES .....	777
	-----
THE SUM OF CRITICAL VOLUMES .....	1379
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.849
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 15, WEYBURN AVENUE AND GLENDON AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	235	351	0	0
EASTBOUND	0	227	192	0
NORTHBOUND	183	0	73	118
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	586
EASTBOUND	N/A	N/A	N/A	N/A	N/A	419
NORTHBOUND	183	N/A	N/A	N/A	73	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	654
NORTH-SOUTH CRITICAL VOLUMES .....	183
	-----
THE SUM OF CRITICAL VOLUMES .....	837
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.488
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 16, WEYBURN AVENUE AND TIVERTON AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	0	217	29	0
EASTBOUND	61	193	0	0
NORTHBOUND	94	162	37	0
SOUTHBOUND	48	0	79	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	246
EASTBOUND	N/A	N/A	N/A	N/A	N/A	254
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	293
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	127

EAST-WEST CRITICAL VOLUMES ..... 307  
NORTH-SOUTH CRITICAL VOLUMES ..... 340  
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THE SUM OF CRITICAL VOLUMES ..... 647  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 0\*  
  
CMA VALUE ..... 0.647  
  
LEVEL OF SERVICE ..... B

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Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 17, WEYBURN AVENUE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	14	96	25	0
EASTBOUND	159	100	123	0
NORTHBOUND	29	521	8	0
SOUTHBOUND	18	686	143	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	135
EASTBOUND	N/A	N/A	N/A	N/A	N/A	382
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	558
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	847

EAST-WEST CRITICAL VOLUMES .....	396
NORTH-SOUTH CRITICAL VOLUMES .....	876
	-----
THE SUM OF CRITICAL VOLUMES .....	1272
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.778
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 18, KINROSS AVENUE AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	323	0	128	30
EASTBOUND	0	0	0	0
NORTHBOUND	0	1285	31	89
SOUTHBOUND	44	1402	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	0	0	1	0	3
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	2	0	1	0	3
SOUTHBOUND	1	0	2	0	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	178	N/A	N/A	N/A	128	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	642	N/A	31	N/A
SOUTHBOUND	44	N/A	701	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	178
NORTH-SOUTH CRITICAL VOLUMES .....	701
	-----
THE SUM OF CRITICAL VOLUMES .....	879
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.516
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 19, KINROSS AVENUE AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	139	97	204	0
EASTBOUND	66	154	107	0
NORTHBOUND	131	800	71	0
SOUTHBOUND	68	937	159	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	139	N/A	N/A	301	N/A	N/A
EASTBOUND	66	N/A	N/A	261	N/A	N/A
NORTHBOUND	131	N/A	436	436	N/A	N/A
SOUTHBOUND	68	N/A	548	548	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	400
NORTH-SOUTH CRITICAL VOLUMES .....	679
	-----
THE SUM OF CRITICAL VOLUMES .....	1079
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.649
LEVEL OF SERVICE .....	B

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 20, KINROSS AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	45	117	66	0
EASTBOUND	79	161	94	0
NORTHBOUND	109	1012	84	0
SOUTHBOUND	40	1158	55	58

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	0	1	0	1	0	0	2
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	45	N/A	N/A	183	N/A	N/A
EASTBOUND	79	N/A	N/A	255	N/A	N/A
NORTHBOUND	N/A	330	N/A	875	N/A	N/A
SOUTHBOUND	N/A	509	688	N/A	55	N/A

EAST-WEST CRITICAL VOLUMES .....	300
NORTH-SOUTH CRITICAL VOLUMES .....	915
	-----
THE SUM OF CRITICAL VOLUMES .....	1215
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.740
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 21, KINROSS AVENUE AND GLENDON AVENUE  
DATE: 12/30/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	0	0	0	0
EASTBOUND	186	0	86	169
NORTHBOUND	169	0	41	281
SOUTHBOUND	281	0	51	186

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	0	0
EASTBOUND	1	0	0	0	1	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	1	0	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
EASTBOUND	186	N/A	N/A	N/A	86	N/A
NORTHBOUND	169	N/A	N/A	N/A	41	N/A
SOUTHBOUND	281	N/A	N/A	N/A	51	N/A

EAST-WEST CRITICAL VOLUMES .....	186
NORTH-SOUTH CRITICAL VOLUMES .....	322
	-----
THE SUM OF CRITICAL VOLUMES .....	508
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.508
LEVEL OF SERVICE .....	A

-----  
Capacity assumed = 1000.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 22, LINDBROOK DRIVE AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS MIN ON GREEN	** MAX ON RED
WESTBOUND	226	0	265	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	858	260	0
SOUTHBOUND	125	1071	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	226	N/A	N/A	265	N/A	N/A
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	0	N/A	559	559	N/A	N/A
SOUTHBOUND	125	N/A	536	536	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	265
NORTH-SOUTH CRITICAL VOLUMES .....	684
	-----
THE SUM OF CRITICAL VOLUMES .....	949
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.563
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 23, LINDBROOK DRIVE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	224	264	128	0
EASTBOUND	39	152	104	0
NORTHBOUND	100	1218	222	112
SOUTHBOUND	37	1211	80	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	0	1	1	0	1	0	3
SOUTHBOUND	0	1	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	277	N/A	340	N/A	N/A
EASTBOUND	N/A	129	N/A	166	N/A	N/A
NORTHBOUND	N/A	409	909	N/A	222	N/A
SOUTHBOUND	N/A	319	504	504	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	390
NORTH-SOUTH CRITICAL VOLUMES .....	946
	-----
THE SUM OF CRITICAL VOLUMES .....	1336
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.821
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 24, LINDBROOK DRIVE AND GLENDON AVENUE/TIVERTON AVENUE  
DATE: 12/30/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS MIN ON GREEN	** MAX ON RED
WESTBOUND	362	678	180	0
EASTBOUND	192	392	61	0
NORTHBOUND	57	469	0	263
SOUTHBOUND	141	253	104	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	0	1	0	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	381	N/A	839	N/A	N/A
EASTBOUND	192	N/A	N/A	453	N/A	N/A
NORTHBOUND	57	N/A	469	N/A	0	N/A
SOUTHBOUND	141	N/A	N/A	357	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	1031
NORTH-SOUTH CRITICAL VOLUMES .....	610
	-----
THE SUM OF CRITICAL VOLUMES .....	1641
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	1.024
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 25, LINDBROOK DRIVE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	0	128	45	0
EASTBOUND	0	0	0	0
NORTHBOUND	0	538	0	165
SOUTHBOUND	52	764	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	0	0
NORTHBOUND	0	0	1	0	1	0	2
SOUTHBOUND	0	1	0	0	0	0	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	173
EASTBOUND	N/A	N/A	N/A	N/A	N/A	N/A
NORTHBOUND	N/A	N/A	538	N/A	0	N/A
SOUTHBOUND	N/A	816	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	173
NORTH-SOUTH CRITICAL VOLUMES .....	816
	-----
THE SUM OF CRITICAL VOLUMES .....	989
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	0*
CMA VALUE .....	0.659
LEVEL OF SERVICE .....	B

-----  
Capacity assumed = 1500.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 26, WILSHIRE BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	386	3761	298	0
EASTBOUND	255	3255	266	0
NORTHBOUND	181	792	264	0
SOUTHBOUND	90	328	82	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	1	0	3	1	0	0	5
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	212	N/A	1015	1015	N/A	N/A
EASTBOUND	255	N/A	880	880	N/A	N/A
NORTHBOUND	181	N/A	528	528	N/A	N/A
SOUTHBOUND	90	N/A	205	205	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	1270
NORTH-SOUTH CRITICAL VOLUMES .....	618
	-----
THE SUM OF CRITICAL VOLUMES .....	1888
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	5
CMA VALUE .....	1.303
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 27, WILSHIRE BOULEVARD AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	95	3182	75	0
EASTBOUND	389	3358	162	0
NORTHBOUND	297	724	84	74
SOUTHBOUND	76	358	892	214

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	52	N/A	814	814	N/A	N/A
EASTBOUND	214	N/A	880	880	N/A	N/A
NORTHBOUND	297	N/A	362	N/A	84	N/A
SOUTHBOUND	76	N/A	358	N/A	446	N/A

EAST-WEST CRITICAL VOLUMES ..... 1028  
NORTH-SOUTH CRITICAL VOLUMES ..... 743  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1771  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3  
  
CMA VALUE ..... 1.173  
  
LEVEL OF SERVICE ..... F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 28, WILSHIRE BOULEVARD AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	39	2253	125	0
EASTBOUND	541	2825	116	0
NORTHBOUND	96	405	17	78
SOUTHBOUND	122	296	312	596

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	39	N/A	594	594	N/A	N/A
EASTBOUND	298	N/A	735	735	N/A	N/A
NORTHBOUND	96	N/A	202	N/A	17	N/A
SOUTHBOUND	122	N/A	296	N/A	156	N/A

EAST-WEST CRITICAL VOLUMES .....	892
NORTH-SOUTH CRITICAL VOLUMES .....	392
	-----
THE SUM OF CRITICAL VOLUMES .....	1284
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.831
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 29, WILSHIRE BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	193	1922	158	0
EASTBOUND	496	2530	214	0
NORTHBOUND	168	969	293	0
SOUTHBOUND	154	897	178	273

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	1	0	0	4
SOUTHBOUND	1	0	3	0	1	0	5

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	106	N/A	520	520	N/A	N/A
EASTBOUND	273	N/A	686	686	N/A	N/A
NORTHBOUND	168	N/A	421	421	N/A	N/A
SOUTHBOUND	154	N/A	299	N/A	178	N/A

EAST-WEST CRITICAL VOLUMES ..... 793  
NORTH-SOUTH CRITICAL VOLUMES ..... 575  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1368  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4  
  
CMA VALUE ..... 0.925  
  
LEVEL OF SERVICE ..... E

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 30, WILSHIRE BOULEVARD AND GLENDON AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	132	2003	274	0
EASTBOUND	320	2679	69	0
NORTHBOUND	98	109	57	0
SOUTHBOUND	239	172	215	125

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	132	N/A	569	569	N/A	N/A
EASTBOUND	176	N/A	687	687	N/A	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	264
SOUTHBOUND	239	N/A	172	N/A	108	N/A

EAST-WEST CRITICAL VOLUMES .....	819
NORTH-SOUTH CRITICAL VOLUMES .....	503
	-----
THE SUM OF CRITICAL VOLUMES .....	1322
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.858
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 31, WILSHIRE BOULEVARD AND SELBY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	57	2480	68	0
EASTBOUND	29	2686	0	75
NORTHBOUND	53	57	102	0
SOUTHBOUND	142	48	0	16

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	0	0	1	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	57	N/A	849	849	N/A	N/A
EASTBOUND	29	N/A	895	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	212
SOUTHBOUND	N/A	190	N/A	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	952
NORTH-SOUTH CRITICAL VOLUMES .....	354
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THE SUM OF CRITICAL VOLUMES .....	1306
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.801
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 32, WILSHIRE BOULEVARD AND WESTHOLME AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	54	2568	71	0
EASTBOUND	63	2792	17	22
NORTHBOUND	43	79	76	0
SOUTHBOUND	123	166	30	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	3	0	1	0	5
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	54	N/A	880	880	N/A	N/A
EASTBOUND	63	N/A	931	N/A	17	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	198
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	319

EAST-WEST CRITICAL VOLUMES .....	985
NORTH-SOUTH CRITICAL VOLUMES .....	362
	-----
THE SUM OF CRITICAL VOLUMES .....	1347
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.875
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 33, WILSHIRE BOULEVARD AND WARNER AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	35	2337	46	0
EASTBOUND	80	2675	40	0
NORTHBOUND	62	109	4	18
SOUTHBOUND	71	70	0	45

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	1	0	0	4
EASTBOUND	1	0	2	1	0	0	4
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	35	N/A	794	794	N/A	N/A
EASTBOUND	80	N/A	905	905	N/A	N/A
NORTHBOUND	62	N/A	109	N/A	4	N/A
SOUTHBOUND	71	N/A	70	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	940
NORTH-SOUTH CRITICAL VOLUMES .....	180
	-----
THE SUM OF CRITICAL VOLUMES .....	1120
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.716
LEVEL OF SERVICE .....	C

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 34, WELLWORTH AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	302	152	61	0
EASTBOUND	21	67	73	0
NORTHBOUND	53	1283	82	0
SOUTHBOUND	67	1318	67	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	515
EASTBOUND	N/A	N/A	N/A	N/A	N/A	161
NORTHBOUND	53	N/A	682	682	N/A	N/A
SOUTHBOUND	67	N/A	692	692	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 536  
NORTH-SOUTH CRITICAL VOLUMES ..... 749  
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THE SUM OF CRITICAL VOLUMES ..... 1285  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 0.787  
  
LEVEL OF SERVICE ..... C

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\* Includes CMA value decreased due to ATSAC Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 35, OHIO AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	76	293	52	0
EASTBOUND	180	387	19	54
NORTHBOUND	107	1171	54	0
SOUTHBOUND	60	1422	245	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	1	0	1	0	3
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	76	N/A	N/A	345	N/A	N/A
EASTBOUND	180	N/A	387	N/A	19	N/A
NORTHBOUND	107	N/A	612	612	N/A	N/A
SOUTHBOUND	60	N/A	834	834	N/A	N/A

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EAST-WEST CRITICAL VOLUMES ..... 525
NORTH-SOUTH CRITICAL VOLUMES ..... 941
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THE SUM OF CRITICAL VOLUMES ..... 1466

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2

CMA VALUE ..... 0.907

LEVEL OF SERVICE ..... E

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 36, SANTA MONICA BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	170	1868	392	56
EASTBOUND	217	2399	48	68
NORTHBOUND	126	1079	88	0
SOUTHBOUND	111	1115	37	136

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	0	1	0	6
EASTBOUND	2	0	3	0	1	0	6
NORTHBOUND	0	1	1	1	0	0	3
SOUTHBOUND	1	0	2	0	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	94	N/A	623	N/A	392	N/A
EASTBOUND	119	N/A	800	N/A	48	N/A
NORTHBOUND	126	N/A	584	584	N/A	N/A
SOUTHBOUND	111	N/A	558	N/A	37	N/A

EAST-WEST CRITICAL VOLUMES .....	894
NORTH-SOUTH CRITICAL VOLUMES .....	695
	-----
THE SUM OF CRITICAL VOLUMES .....	1589
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	4
CMA VALUE .....	1.086
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATSAC Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION:1, SUNSET BOULEVARD AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	RIGHT TURNS MAX ON RED
WESTBOUND	317	1102	0	0
EASTBOUND	0	2125	378	0
NORTHBOUND	65	0	66	158
SOUTHBOUND	0	0	0	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	0	0	0	3
EASTBOUND	0	0	1	1	0	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	317	N/A	551	N/A	N/A	N/A
EASTBOUND	N/A	N/A	1252	1252	N/A	N/A
NORTHBOUND	65	N/A	N/A	N/A	66	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	1569
NORTH-SOUTH CRITICAL VOLUMES .....	66
	-----
THE SUM OF CRITICAL VOLUMES .....	1635
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	1.047
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 5, MONTANA BOULEVARD/GAYLEY AVENUE AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	13	112	42	0
EASTBOUND	118	786	49	0
NORTHBOUND	96	341	34	0
SOUTHBOUND	134	429	37	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	167
EASTBOUND	N/A	N/A	N/A	N/A	N/A	953
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	471
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	600

EAST-WEST CRITICAL VOLUMES .....	966
NORTH-SOUTH CRITICAL VOLUMES .....	696
	-----
THE SUM OF CRITICAL VOLUMES .....	1662
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	1.008
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 13, WEYBURN AVENUE AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	44	107	40	0
EASTBOUND	411	266	67	0
NORTHBOUND	81	781	158	0
SOUTHBOUND	36	380	218	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	81	N/A	110	N/A	N/A
EASTBOUND	411	N/A	N/A	333	N/A	N/A
NORTHBOUND	81	N/A	470	470	N/A	N/A
SOUTHBOUND	36	N/A	299	299	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	521
NORTH-SOUTH CRITICAL VOLUMES .....	506
	-----
THE SUM OF CRITICAL VOLUMES .....	1027
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.585
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 14, WEYBURN AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	65	106	41	0
EASTBOUND	69	147	46	0
NORTHBOUND	68	1114	34	0
SOUTHBOUND	18	368	0	38

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	106	N/A	106	N/A	N/A
EASTBOUND	N/A	131	N/A	131	N/A	N/A
NORTHBOUND	68	N/A	574	574	N/A	N/A
SOUTHBOUND	N/A	150	236	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	196
NORTH-SOUTH CRITICAL VOLUMES .....	592
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THE SUM OF CRITICAL VOLUMES .....	788
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.425
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 17, WEYBURN AVENUE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	4	41	34	0
EASTBOUND	61	17	47	0
NORTHBOUND	23	544	11	0
SOUTHBOUND	13	341	80	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	79
EASTBOUND	N/A	N/A	N/A	N/A	N/A	125
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	578
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	434

EAST-WEST CRITICAL VOLUMES .....	140
NORTH-SOUTH CRITICAL VOLUMES .....	591
	-----
THE SUM OF CRITICAL VOLUMES .....	731
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.390
LEVEL OF SERVICE .....	A

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\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 24, LINDBROOK DRIVE AND GLENDON AVENUE/TIVERTON AVENUE  
DATE: 12/30/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	67	312	187	0
EASTBOUND	101	394	15	0
NORTHBOUND	96	604	363	34
SOUTHBOUND	65	140	10	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	0	1	0	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	67	N/A	250	250	N/A	N/A
EASTBOUND	101	N/A	N/A	409	N/A	N/A
NORTHBOUND	96	N/A	604	N/A	363	N/A
SOUTHBOUND	65	N/A	N/A	150	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	476
NORTH-SOUTH CRITICAL VOLUMES .....	669
	-----
THE SUM OF CRITICAL VOLUMES .....	1145
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.663
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATCS Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 26, WILSHIRE BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	147	3678	69	0
EASTBOUND	63	3693	203	0
NORTHBOUND	226	286	256	0
SOUTHBOUND	259	682	233	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	1	0	3	1	0	0	5
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	81	N/A	937	937	N/A	N/A
EASTBOUND	63	N/A	974	974	N/A	N/A
NORTHBOUND	226	N/A	271	271	N/A	N/A
SOUTHBOUND	259	N/A	458	458	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	1055
NORTH-SOUTH CRITICAL VOLUMES .....	684
	-----
THE SUM OF CRITICAL VOLUMES .....	1739
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	5
CMA VALUE .....	1.165
LEVEL OF SERVICE .....	F

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\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 27, WILSHIRE BOULEVARD AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	102	2609	42	0
EASTBOUND	368	4197	206	0
NORTHBOUND	106	558	222	28
SOUTHBOUND	288	288	316	202

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R	TOTAL LANES
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED	
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT	LEFT	THROUGH	RIGHT	RIGHT	L/T/R
	ONLY	SHARED	ONLY	SHARED	ONLY	SHARED
WESTBOUND	56	N/A	663	663	N/A	N/A
EASTBOUND	202	N/A	1101	1101	N/A	N/A
NORTHBOUND	106	N/A	279	N/A	222	N/A
SOUTHBOUND	288	N/A	201	201	201	N/A

EAST-WEST CRITICAL VOLUMES .....	1157
NORTH-SOUTH CRITICAL VOLUMES .....	567
	-----
THE SUM OF CRITICAL VOLUMES .....	1724
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	1.110
LEVEL OF SERVICE .....	F

-----  
\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 29, WILSHIRE BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	168	2265	133	0
EASTBOUND	547	2422	157	0
NORTHBOUND	109	797	140	0
SOUTHBOUND	63	329	0	249

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	1	0	0	4
SOUTHBOUND	1	0	3	0	1	0	5

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	92	N/A	600	600	N/A	N/A
EASTBOUND	301	N/A	645	645	N/A	N/A
NORTHBOUND	109	N/A	312	312	N/A	N/A
SOUTHBOUND	63	N/A	110	N/A	0	N/A

EAST-WEST CRITICAL VOLUMES .....	901
NORTH-SOUTH CRITICAL VOLUMES .....	375
	-----
THE SUM OF CRITICAL VOLUMES .....	1276
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	4
CMA VALUE .....	0.828
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 30, WILSHIRE BOULEVARD AND GLENDON AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	79	2325	239	0
EASTBOUND	351	1954	226	0
NORTHBOUND	20	131	0	16
SOUTHBOUND	82	53	15	96

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	0	1	0	0	1	0	2
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	79	N/A	641	641	N/A	N/A
EASTBOUND	193	N/A	545	545	N/A	N/A
NORTHBOUND	N/A	151	N/A	N/A	0	N/A
SOUTHBOUND	82	N/A	53	N/A	8	N/A

EAST-WEST CRITICAL VOLUMES .....	834
NORTH-SOUTH CRITICAL VOLUMES .....	233
	-----
THE SUM OF CRITICAL VOLUMES .....	1067
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.649
LEVEL OF SERVICE .....	B

-----  
\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 35, OHIO AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: AM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	76	353	44	0
EASTBOUND	212	336	0	83
NORTHBOUND	85	1310	30	0
SOUTHBOUND	27	558	79	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	1	0	1	0	3
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	76	N/A	N/A	397	N/A	N/A
EASTBOUND	212	N/A	336	N/A	0	N/A
NORTHBOUND	85	N/A	670	670	N/A	N/A
SOUTHBOUND	27	N/A	318	318	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	609
NORTH-SOUTH CRITICAL VOLUMES .....	697
	-----
THE SUM OF CRITICAL VOLUMES .....	1306
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.771
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 1, SUNSET BOULEVARD AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH		** RIGHT TURNS **		
		MIN	ON GREEN	MAX ON RED
WESTBOUND	LEFT 262 THROUGH 1723		0	0
EASTBOUND	0 1464	186		0
NORTHBOUND	329 0	255		131
SOUTHBOUND	0 0	0		0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	2	0	0	0	3
EASTBOUND	0	0	1	1	0	0	2
NORTHBOUND	1	0	0	0	1	0	2
SOUTHBOUND	0	0	0	0	0	0	0

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	262	N/A	862	N/A	N/A	N/A
EASTBOUND	N/A	N/A	825	825	N/A	N/A
NORTHBOUND	329	N/A	N/A	N/A	255	N/A
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 1087  
NORTH-SOUTH CRITICAL VOLUMES ..... 329  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1416  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3  
  
CMA VALUE ..... 0.894  
  
LEVEL OF SERVICE ..... D

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\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 2, SUNSET BOULEVARD AND HILGARD AVENUE/COPA DE ORO ROAD  
DATE: 10/8/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	353	1291	22	0
EASTBOUND	20	1153	421	0
NORTHBOUND	324	71	272	176
SOUTHBOUND	18	62	11	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	1	1	0	0	3
NORTHBOUND	1	0	0	0	1	1	3
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	353	N/A	656	656	N/A	N/A
EASTBOUND	20	N/A	787	787	N/A	N/A
NORTHBOUND	222	N/A	N/A	N/A	222	222
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	91

EAST-WEST CRITICAL VOLUMES ..... 1140  
NORTH-SOUTH CRITICAL VOLUMES ..... 313

THE SUM OF CRITICAL VOLUMES ..... 1453

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4\*

CMA VALUE ..... 0.957

LEVEL OF SERVICE ..... E

-----  
\* Includes CMA value decreased due to ATCS Implementation.

Northbound and Southbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 5, MONTANA BOULEVARD/GAYLEY AVENUE AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH		** RIGHT TURNS **	
		MIN ON GREEN	MAX ON RED
WESTBOUND	32	666	263
EASTBOUND	53	278	63
NORTHBOUND	118	404	61
SOUTHBOUND	97	453	85

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	961
EASTBOUND	N/A	N/A	N/A	N/A	N/A	394
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	583
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	635

EAST-WEST CRITICAL VOLUMES ..... 1014  
NORTH-SOUTH CRITICAL VOLUMES ..... 753  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1767  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 1.078  
  
LEVEL OF SERVICE ..... F

-----  
\* Includes CMA value decreased due to ATCS Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 11, LE CONTE AVENUE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	16	97	33	0
EASTBOUND	454	131	0	176
NORTHBOUND	48	772	33	0
SOUTHBOUND	20	599	126	292

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	1	0	0	1	0	3
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	16	N/A	N/A	130	N/A	N/A
EASTBOUND	292	292	N/A	N/A	0	N/A
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	853
SOUTHBOUND	N/A	279	340	N/A	126	N/A

EAST-WEST CRITICAL VOLUMES ..... 422  
NORTH-SOUTH CRITICAL VOLUMES ..... 873

THE SUM OF CRITICAL VOLUMES ..... 1295

NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3\*

CMA VALUE ..... 0.809

LEVEL OF SERVICE ..... D

\* Includes CMA value decreased due to ATCS Implementation.

Eastbound and Westbound approaches have opposed signal phases.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 13, WEYBURN AVENUE AND GAYLEY AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	125	263	118	0
EASTBOUND	205	274	77	0
NORTHBOUND	113	737	201	0
SOUTHBOUND	119	923	576	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT		THROUGH ONLY	RIGHT		L/T/R SHARED	TOTAL LANES
	ONLY	SHARED		SHARED	ONLY		
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT		THROUGH ONLY	RIGHT		L/T/R SHARED
	ONLY	SHARED		SHARED	ONLY	
WESTBOUND	N/A	206	N/A	300	N/A	N/A
EASTBOUND	205	N/A	N/A	351	N/A	N/A
NORTHBOUND	113	N/A	469	469	N/A	N/A
SOUTHBOUND	119	N/A	750	750	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	505
NORTH-SOUTH CRITICAL VOLUMES .....	863
	-----
THE SUM OF CRITICAL VOLUMES .....	1368
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.812
LEVEL OF SERVICE .....	D

-----  
\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 14, WEYBURN AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH		** RIGHT TURNS **	
		MIN ON GREEN	MAX ON RED
WESTBOUND	LEFT 116 THROUGH 305	79	0
EASTBOUND	102 341	167	0
NORTHBOUND	162 917	78	0
SOUTHBOUND	34 1061	27	64

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	1	0	1	0	0	2
EASTBOUND	0	1	0	1	0	0	2
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	0	1	1	0	1	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	161	N/A	340	N/A	N/A
EASTBOUND	N/A	258	N/A	352	N/A	N/A
NORTHBOUND	162	N/A	498	498	N/A	N/A
SOUTHBOUND	N/A	480	615	N/A	27	N/A

EAST-WEST CRITICAL VOLUMES .....	468
NORTH-SOUTH CRITICAL VOLUMES .....	777
	-----
THE SUM OF CRITICAL VOLUMES .....	1245
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.730
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 17, WEYBURN AVENUE AND HILGARD AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH		** RIGHT TURNS **	
		MIN ON GREEN	MAX ON RED
	LEFT	THROUGH	
WESTBOUND	14	96	25
EASTBOUND	159	100	123
NORTHBOUND	29	521	8
SOUTHBOUND	18	686	143

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	0	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	1	1
NORTHBOUND	0	0	0	0	0	1	1
SOUTHBOUND	0	0	0	0	0	1	1

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	N/A	N/A	N/A	N/A	N/A	135
EASTBOUND	N/A	N/A	N/A	N/A	N/A	382
NORTHBOUND	N/A	N/A	N/A	N/A	N/A	558
SOUTHBOUND	N/A	N/A	N/A	N/A	N/A	847

EAST-WEST CRITICAL VOLUMES .....	396
NORTH-SOUTH CRITICAL VOLUMES .....	876
	-----
THE SUM OF CRITICAL VOLUMES .....	1272
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.748
LEVEL OF SERVICE .....	C

-----  
\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 24, LINDBROOK DRIVE AND GLENDON AVENUE/TIVERTON AVENUE  
DATE: 12/30/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS MIN ON GREEN	** MAX ON RED
WESTBOUND	362	678	180	0
EASTBOUND	192	392	61	0
NORTHBOUND	57	469	82	181
SOUTHBOUND	141	253	104	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	1	1	0	0	3
EASTBOUND	1	0	0	1	0	0	2
NORTHBOUND	1	0	1	0	1	0	3
SOUTHBOUND	1	0	0	1	0	0	2

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	362	N/A	429	429	N/A	N/A
EASTBOUND	192	N/A	N/A	453	N/A	N/A
NORTHBOUND	57	N/A	469	N/A	82	N/A
SOUTHBOUND	141	N/A	N/A	357	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 815  
NORTH-SOUTH CRITICAL VOLUMES ..... 610  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1425  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 2  
  
CMA VALUE ..... 0.850  
  
LEVEL OF SERVICE ..... D

-----  
\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 26, WILSHIRE BOULEVARD AND SEPULVEDA BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	386	3761	298	0
EASTBOUND	255	3255	266	0
NORTHBOUND	181	792	264	0
SOUTHBOUND	90	328	82	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	1	0	3	1	0	0	5
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	212	N/A	1015	1015	N/A	N/A
EASTBOUND	255	N/A	880	880	N/A	N/A
NORTHBOUND	181	N/A	528	528	N/A	N/A
SOUTHBOUND	90	N/A	205	205	N/A	N/A

EAST-WEST CRITICAL VOLUMES ..... 1270  
NORTH-SOUTH CRITICAL VOLUMES ..... 618  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1888  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 5  
  
CMA VALUE ..... 1.273  
  
LEVEL OF SERVICE ..... F

-----  
\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 27, WILSHIRE BOULEVARD AND VETERAN AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH			** RIGHT TURNS **	
	LEFT	THROUGH	MIN ON GREEN	MAX ON RED
WESTBOUND	95	3182	75	0
EASTBOUND	389	3358	162	0
NORTHBOUND	297	724	84	74
SOUTHBOUND	76	358	892	214

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	0	1	0	4
SOUTHBOUND	1	0	1	1	1	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	52	N/A	814	814	N/A	N/A
EASTBOUND	214	N/A	880	880	N/A	N/A
NORTHBOUND	297	N/A	362	N/A	84	N/A
SOUTHBOUND	76	N/A	358	N/A	446	N/A

EAST-WEST CRITICAL VOLUMES ..... 1028  
NORTH-SOUTH CRITICAL VOLUMES ..... 743  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1771  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 3  
  
CMA VALUE ..... 1.143  
  
LEVEL OF SERVICE ..... F

-----  
\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 29, WILSHIRE BOULEVARD AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH		** RIGHT TURNS **	
		MIN ON GREEN	MAX ON RED
WESTBOUND	LEFT 193 THROUGH 1922	158	0
EASTBOUND	496 2530	214	0
NORTHBOUND	168 969	293	0
SOUTHBOUND	154 897	178	273

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	2	0	3	1	0	0	6
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	1	0	2	1	0	0	4
SOUTHBOUND	1	0	3	0	1	0	5

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	106	N/A	520	520	N/A	N/A
EASTBOUND	273	N/A	686	686	N/A	N/A
NORTHBOUND	168	N/A	421	421	N/A	N/A
SOUTHBOUND	154	N/A	299	N/A	178	N/A

EAST-WEST CRITICAL VOLUMES ..... 793  
NORTH-SOUTH CRITICAL VOLUMES ..... 575  
-----  
THE SUM OF CRITICAL VOLUMES ..... 1368  
  
NUMBER OF CRITICAL CLEARANCE INTERVALS .... 4  
  
CMA VALUE ..... 0.895  
  
LEVEL OF SERVICE ..... D

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\* Includes CMA value decreased due to ATCS Implementation.



CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 30, WILSHIRE BOULEVARD AND GLENDON AVENUE  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	132	2003	274	0
EASTBOUND	320	2679	69	0
NORTHBOUND	98	109	0	57
SOUTHBOUND	239	172	215	125

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	3	1	0	0	5
EASTBOUND	2	0	3	1	0	0	6
NORTHBOUND	0	1	0	0	1	0	2
SOUTHBOUND	1	0	1	0	2	0	4

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	132	N/A	569	569	N/A	N/A
EASTBOUND	176	N/A	687	687	N/A	N/A
NORTHBOUND	N/A	207	N/A	N/A	0	N/A
SOUTHBOUND	239	N/A	172	N/A	108	N/A

EAST-WEST CRITICAL VOLUMES .....	819
NORTH-SOUTH CRITICAL VOLUMES .....	446
	-----
THE SUM OF CRITICAL VOLUMES .....	1265
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	3
CMA VALUE .....	0.788
LEVEL OF SERVICE .....	C

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\* Includes CMA value decreased due to ATCS Implementation.

CRAIN AND ASSOCIATES  
CMA CALCULATIONS

INTERSECTION: 35, OHIO AVENUE AND WESTWOOD BOULEVARD  
DATE: 8/12/2002 INITIALS: RRH PERIOD: PM PEAK HOUR  
CASE: FUTURE (2006) WITH "SUPERMARKET" PROJECT PLUS MITIGATION

\*\* INPUT VOLUMES \*\*

APPROACH	LEFT	THROUGH	** RIGHT TURNS **	
			MIN ON GREEN	MAX ON RED
WESTBOUND	76	293	52	0
EASTBOUND	180	387	19	54
NORTHBOUND	107	1171	54	0
SOUTHBOUND	60	1422	245	0

\*\* NUMBER OF LANES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED	TOTAL LANES
WESTBOUND	1	0	0	1	0	0	2
EASTBOUND	1	0	1	0	1	0	3
NORTHBOUND	1	0	1	1	0	0	3
SOUTHBOUND	1	0	1	1	0	0	3

\*\* ASSIGNED LANE VOLUMES \*\*

APPROACH	LEFT ONLY	LEFT SHARED	THROUGH ONLY	RIGHT SHARED	RIGHT ONLY	L/T/R SHARED
WESTBOUND	76	N/A	N/A	345	N/A	N/A
EASTBOUND	180	N/A	387	N/A	19	N/A
NORTHBOUND	107	N/A	612	612	N/A	N/A
SOUTHBOUND	60	N/A	834	834	N/A	N/A

EAST-WEST CRITICAL VOLUMES .....	525
NORTH-SOUTH CRITICAL VOLUMES .....	941
	-----
THE SUM OF CRITICAL VOLUMES .....	1466
NUMBER OF CRITICAL CLEARANCE INTERVALS ....	2
CMA VALUE .....	0.877
LEVEL OF SERVICE .....	D

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\* Includes CMA value decreased due to ATCS Implementation.

# Crain & Associates

## Of Southern California

### FAX TRANSMITTED

2007 Sawtelle Boulevard, Suite  
Los Angeles, California 90025  
Telephone (310) 473-6508  
Facsimile (310) 444-9771

December 11, 2002

Ms. Esther Tam  
Department of Transportation  
7166 W. Manchester Avenue  
Los Angeles, California 90045

RE: Westwood Palazzo Project – Revisions/Clarifications to Traffic Studies

Dear Esther,

This letter is to provide supplemental information, in the form of minor revisions and clarifications, to the two traffic study reports currently under review by your Department for the proposed Palazzo Westwood project. The information contained herein will supersede the information contained in both the current (August 2002) reports for both the "Shopping Center" and "Supermarket" project alternatives.

The primary revision to the reports concerns the amount of parking provided for the project. As indicated in the current traffic study reports, both the "shopping center" and "supermarket" projects proposed to provide a total of 1,475 parking spaces, primarily located in a multilevel subterranean parking structure. However, recent refinements to the parking structure plans indicate that the project will now provide a total of 1,452 automobile parking spaces, plus a total of 73 bicycle spaces. Although slightly fewer than originally proposed, the 1,452 spaces will remain adequate to meet the parking requirements for either project alternative. As summarized in their respective traffic study reports, the "shopping center" project alternative would require a total of 1,429 spaces (including allowable discounts for bicycle parking), while the "supermarket" project alternative would require a total of 1,395 spaces including the bicycle discounts. Thus, sufficient parking to meet and exceed the current parking requirements will continue to be provided, and the conclusions of the traffic studies that no significant parking impacts are anticipated will remain unchanged.

In addition to this revision to both studies, a clarification of some of the language in the project description may be warranted. In the discussion of the current development on the project site, the traffic studies indicate "the site is currently occupied by a 652-seat Cinema, 42 apartment units and 24,400 square feet of specialty retail. A public surface parking lot containing a total of approximately 385 parking spaces is also located on the site. All of these uses will be removed as part of the project." It should be noted that the 24,400 square feet of retail space has now been

Letter to Esther Tam  
December 11, 2002  
Draft

demolished. However, this use (consisting of multiple shops) was in place, occupied, and operating at the time the traffic counts utilized in the study were performed in 2000 and 2001. Thus, it is appropriate that trip "credits" are allowed for these "removed" uses as indicated in the traffic analyses.

Please review the information contained in the preceding paragraphs, and incorporate it into your review of the traffic studies for the Palazzo Westwood project. As always, feel free to call me if you have any questions regarding these revisions and clarifications, or if there are any questions on the original traffic analyses.

Sincerely,



Ron Hirsch  
Senior Transportation Planner

RH  
C12756

Cc: Howard Katz  
Greg Smith  
Ellen Berkowitz  
Laura Kaufman